
MERCK
Be well
CORPORATE
RESPONSIBILITY
REPORT 2011

CORPORATE RESPONSIBILITY

At Merck, corporate responsibility is our daily commitment to discovering innovative solutions to the world's biggest health challenges.

It is this simple promise that informs all of our actions as we apply our global resources, our talents and our scientific and operational expertise to some of the most significant health, environmental and economic challenges in the world today. We see corporate responsibility as a major business objective, not solely a philanthropic initiative. Ultimately, it helps us to discover better ways to deliver greater value to both shareholders and society.

Through innovative research, groundbreaking partnerships and smarter processes, we are focusing on four priority areas: Access to Health, Environmental Sustainability, Employees, and Ethics & Transparency. With a focus on these priority areas across our entire organization, we are committed to leading the future of healthcare.

CEO LETTER

Merck is leading the way to a healthier future with products that touch the lives and improve the well-being of people and communities around the world. Our product portfolio is among the broadest in the healthcare industry. As a leader in global healthcare, we are committed to addressing critical social, environmental and economic challenges to ensure not only the vitality of our business, but also the health of our world.

That's why innovation and corporate responsibility are at the core of our business strategy and activities. We develop breakthrough medicines and vaccines that tackle unmet medical needs, we adopt positions and advocate for changes that will improve access to these products, and we find new ways to do the right thing for our constituents. This is particularly important today, because we live in a resource-scarce environment. Every dollar, every dosage and every drop of water count. The healthcare system is under constant strain, trying to provide optimum care to more people while reducing costs.

To meet these challenges while achieving our business goals, we rely on the integrity, knowledge, skill and collaboration of Merck colleagues globally. Together, we strive to create an environment of mutual respect and opportunity, even as the company faces global workforce reductions. We remain true to our commitment to act responsibly and with even greater transparency.

In addition to making substantial progress in meeting our business objectives, we launched several significant initiatives in 2011, as well as a new corporate responsibility framework in 2010. For example, as part of our commitment to ensure access to healthcare worldwide, we established a new Research & Development headquarters in Beijing, China, focused on innovative drug discovery and development. Building this new facility in China will enable us to complement our existing R&D capabilities, and facilitate new collaborations with scientists in the region and across emerging markets.

We are looking forward to celebrating the twenty-fifth anniversary of Merck's MECTIZAN® (ivermectin) Donation Program, the longest-running donation program of its kind, with the goal of eliminating river blindness, a leading cause of preventable blindness, and lymphatic filariasis, more commonly known as elephantiasis. Building on this legacy of tackling urgent global health challenges such as river blindness, HIV/AIDS and hepatitis, in September we launched "Merck for Mothers," a long-term effort with global health partners to help create a world where no woman has to die from preventable complications of pregnancy and childbirth. This initiative applies our scientific and business expertise to making proven solutions more widely available, developing new technologies and improving global public awareness about maternal mortality.

Our current corporate responsibility progress constitutes steps along a journey, accelerated by our unwavering commitment to expand access to healthcare, work toward true environmental sustainability, employ a diverse workforce that values collaboration, and operate with the highest standards of integrity. We have an exciting pipeline of new medicines and a growing presence in emerging markets. By staying focused on scientific innovation and responsible business practices, we expect to continue making strides, in partnership with our many stakeholders, while delivering value to our shareholders, customers and patients. We know that our ability to advance human health owes much to listening and working with others who share the same goal. We welcome you to join us on this path toward a healthier future.

Be well,

Kenneth C. Frazier
Chairman and CEO
August 2012

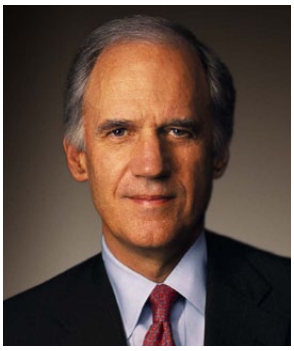
MESSAGE FROM THE BOARD

Dear Stakeholders,

Merck has a rich heritage of corporate responsibility. We are dedicated to providing leading innovations and solutions for tomorrow, while holding ourselves to a high standard of performance and conduct with all stakeholders.

In my position as Lead Director and Chair of the Board's Committee on Governance, Public Policy and Corporate Responsibility, I am aware of the many challenges we face as a company. I recognize the committee's responsibility to advise the Board and management on policies and practices that pertain to the company's responsibilities as a global corporate citizen.

In fact, I believe how we govern ourselves as a company is as important as anything else we do. Good corporate governance benefits our customers and patients, as well as our shareholders, and is essential to our long-term business success.



The Board will continue to examine our global policies and practices to make sure our business operations are in line with our corporate responsibility framework. We will assess the company's progress toward our corporate responsibility goals and commitments, making sure that:

- Our policies and practices reflect our values and business goals
- We have an effective corporate governance structure
- We are operating in a way that is open and transparent

Through innovative research, groundbreaking partnerships and smarter processes, we are prepared to lead in the future of healthcare. As we do so, we will remain competitive and committed to the idea that corporate responsibility makes good business sense.

Sincerely,

William B. Harrison, Jr.
Lead Director and Chair, Committee on Governance,
Public Policy and Corporate Responsibility
August 2012

OUR APPROACH

We aspire to be the best healthcare company in the world and are dedicated to providing leading innovations and solutions for tomorrow.

At Merck, our vision is to make a difference in the lives of people globally through our innovative medicines, vaccines, biologic therapies, consumer health products and animal health products. We have made it our mission to provide distinctive products and services that save and improve lives and satisfy customer needs; to be recognized as a great place to work; and to provide investors with a superior rate of return.

Our corporate responsibility approach is aligned with the company's **mission and values** and articulates how we see our responsibilities in the areas of access to health, ethical and transparent business practices, environmentally sustainable operations, scientific advancement, employee wellness and value-creation for our shareholders.

In short, corporate responsibility at Merck is a daily commitment and a simple promise that is embedded in our business and informs all of our individual actions. It extends to how we achieve our business goals by discovering and demonstrating:

- Smart, sustainable ways to expand global access to effective healthcare
- Environmentally sustainable ways to meet the world's health needs now and in the future
- Better ways to strengthen a workplace where our employees—and our business—can thrive
- Better ways to build and strengthen trusted relationships
- The highest ethical standards and communicating with greater transparency

Since successfully managing social, ethical and environmental issues involves everyone at Merck, we established a companywide corporate responsibility framework, and developed and refined a list of key performance indicators to measure the company's performance and progress in our areas of strategic focus.

Integrated into our approach to corporate responsibility is also a commitment to constructive engagement with stakeholders. We recognize that issues that matter to key stakeholders can very quickly become material issues for our shareholders. So, we seek to balance our responsibilities in ways that support our fiduciary duty to generate long-term shareholder value, while also considering the needs of other stakeholders. **Learn more** about our stakeholder engagement process.

MATERIALITY

In 2010, after having successfully completed our merger with Schering-Plough, Merck took the opportunity to reassess our corporate responsibility efforts and focus on a more strategic approach that is linked directly to our core business drivers. Our corporate responsibility materiality assessment was based on prior assessments but included more precise criteria in certain areas: business relevance; satisfying stakeholder demands; opportunities for improvement; as well as areas of potential leadership.

Based on this analysis, an overall set of issues was presented to the Public Policy and Responsibility Council for a final materiality assessment. After review, key issues were identified through a consideration of numerous sources, including:

- Merck corporate plans, objectives and strategies
- Company policies and initiatives related to company policies
- Employee surveys and other input from employees
- Customer feedback obtained through focus groups and other methods
- Shareholder resolutions and other feedback received through ongoing dialogue with shareholders
- Input from investors and investor groups committed to sustainable investing
- Partners, nongovernmental organizations, suppliers and other stakeholders
- Media coverage
- Stakeholder feedback on prior corporate responsibility reporting
- Industry benchmarking
- The Global Reporting Initiative (GRI), Access to Medicine Index, the UN Global Compact principles and other guidelines

The key issues in this report have been approved by Merck's Public Policy and Responsibility Council based on the three parameters used to define and determine materiality for the purpose of our corporate responsibility reporting:

- Impact on Merck's ability to achieve its business strategy
- Level of concern to external stakeholders
- Degree to which Merck can control and influence the topic or issue

As part of our stakeholder engagement process, we review the suggestions and expectations of our stakeholders to ensure that we are reporting on issues that are of most relevance to them, as compared with those identified through our own evaluations. In this way, we can determine the areas of our corporate responsibility approach that require further review and identify issues that we might clarify in the future.

Merck recognizes the importance of issues that may not be within the company's immediate or total control, such as climate change, global poverty and access to medicines, particularly in the developing world., We believe that we can, however, influence progress in these areas by addressing these issues, particularly through public policy and advocacy or through partnerships with others.

Merck has received positive feedback from external stakeholders on our materiality assessment process. We will continue to use this process and seek additional feedback in order to further refine our key corporate responsibility issues in future reports. We also anticipate that our process will evolve as we learn from experience and from continued dialogue with our stakeholders.

Our next report will include an interactive materiality index that outlines the issues that are most important to our stakeholders and how we are prioritizing them internally.

CR GOVERNANCE

Merck's governance of corporate responsibility continued to advance throughout 2011.

The Office of Corporate Responsibility

Merck's corporate responsibility performance is dependent on all Merck employees—from Merck's Chairman and CEO to staff in each business unit, subsidiary, manufacturing plant and research laboratory. All of us at Merck are aware of our corporate responsibilities through the Merck Code of Conduct, *Our Values and Standards*, but we also recognize that a central coordinating function is necessary to ensure a comprehensive approach to corporate responsibility.

The Office of Corporate Responsibility coordinates the development, implementation and communication of Merck's global corporate responsibility approach and, with the Public Policy and Responsibility Council, for reporting on Merck's corporate responsibility performance. The Office of Corporate Responsibility works with business units and functional areas to integrate Merck's corporate responsibility principles into business policies, strategies and practices—and brings the voice of external stakeholders into decision-making processes.

Since its inception in March 2007, the Office of Corporate Responsibility has brought new focus and coherence to the company's corporate responsibility efforts and has established more systematic processes for data gathering, analysis and stakeholder engagement. The Office of Corporate Responsibility, which supports the company's business strategy, is accountable for producing an annual corporate responsibility report. To contact members of the Office of Corporate Responsibility, please **click here**.

The Public Policy and Responsibility Council

In addition to the Office of Corporate Responsibility, Merck established the Public Policy and Responsibility Council, a senior-level decision-making governance body responsible for developing and monitoring Merck's corporate responsibility approach, targets and progress against key performance indicators. Membership includes senior Merck leaders across all divisions and major functions. The council's responsibilities include reviewing external issues that may affect Merck's business and reputation; providing high-level guidance on Merck's overall approach to corporate responsibility, such as deciding on priority issues; developing policies and position statements; identifying key external stakeholders and engaging in outreach; providing input into Merck's annual corporate responsibility report; and providing ongoing counsel and guidance to the Office of Corporate Responsibility.

The Corporate Responsibility Report Working Group

In 2010, the Office of Corporate Responsibility established the Corporate Responsibility Report Working Group, each member of which works directly with a member of the Public Policy and Responsibility Council to promote further integration of corporate responsibility into the business. Individual members have been chosen to be active advocates for corporate responsibility within their respective areas. In addition, the members of the working group, a diverse selection of employees from all divisions of the company, serve as content experts in their respective areas and work with the Office of Corporate Responsibility to help set goals and develop metrics that support and measure Merck's overall corporate responsibility strategy and objectives.

Executive Committee

Our Executive Committee manages the business of Merck, and is headed by Merck's Chairman and CEO, Kenneth C. Frazier. The committee's members, representing the many areas of the company, are responsible for reviewing the nonfinancial corporate responsibility indicators annually and the company's progress against our corporate responsibility commitments, and reviewing and approving the annual corporate responsibility report. **Learn more**.

Board Committee on Governance, Public Policy & Corporate Responsibility

Six independent directors comprise Merck's Board Committee on Governance, Public Policy & Corporate Responsibility, which is responsible for advising the Board of Directors and management on company policies and practices that pertain to the company's responsibilities as a global corporate citizen; its special obligations as a healthcare company whose products and services affect health and quality of life around the world; and its commitment to the highest standards of ethics and integrity in all its dealings.

Additionally, the committee is responsible for taking a leadership role in shaping the corporate governance of the company, including the development of a set of corporate governance guidelines for Board approval.

In addition to the Board Committee on Governance, Public Policy & Corporate Responsibility, other **Board committees** oversee issues related to corporate responsibility, such as audit and compliance, executive compensation and research.

STAKEHOLDER ENGAGEMENT

At Merck, we understand that we must rise to the challenge of greater stakeholder expectations.

We also recognize that we can't solve major health, environmental and economic challenges alone, but must collaborate with others who share our commitment and who bring their own unique expertise to the table. This understanding forms the core of Merck's approach and commitment to stakeholder engagement.

Merck conducts stakeholder engagement at both corporate and local levels, depending on the issue. We engage with industry, healthcare bodies, nongovernmental organizations (NGOs), opinion leaders, patient groups, governments, academic organizations, policy makers, our employees and others to inform our policies, practices and the development of our products.

Our intention is to build lasting relationships with our stakeholders from the outset, to understand their objectives, their expectations of Merck and the potential for collaboration, and to enhance their understanding of—and trust in—us. We strive to exchange information, views and recommendations; share activities and progress against key goals; and partner toward common objectives.

Engagement may take the form of one-on-one meetings; expert input forums or roundtable discussions; industry coalitions; or formal partnerships.

Patients and Their Families

Everything we do is ultimately for patients, and we are primarily accountable to this stakeholder group, working hard to ensure that our innovative products meet their health needs. For more information on our work with patient groups, please **click here**.

STAKEHOLDERS ASKED . . .	WE DID THIS . . .
Greater transparency on trade association dues used for lobbying and advocacy purposes	Reduced threshold by which we disclose portion of dues paid to trade associations used for lobbying and advocacy purposes from $50,000, which we began to disclose in 2008, to $25,000
Formalized Internal Code of Conduct for Political Contributions	Developed Principles Governing Corporate and Political Action Committee Spending
Influence trade associations to which we belong to publicly disclose their political activities	Encouraged all trade associations to which we belong to publicly disclose their political activities, though we cannot require them to do so
Report twice a year to the Merck Board of Directors on the company's political contributions, as well as on the company's payments to trade associations and other tax-exempt organizations, that may be used for lobbying and political activities	Starting in 2011, we will report twice a year—versus once a year—to the Merck Board of Directors on this information
Increase transparency on the Merck website about lobbying costs	Starting in 2011, we will disclose our costs associated with lobbying in the European Union and the United States
Make information on policy, approach and responsible practices related to animal research easier to find on the Merck website	Redesigned our CR Reporting website to highlight our work related to animal research, making it easier to find
Provide greater clarity on company's position on climate change public policy and legislation	Revised our climate change public policy statement, available on merck.com, to include the key principles we support in the climate change public policy discussion

Doctors, Healthcare Professionals and Scientists

Doctors and patients look to us to provide accurate and balanced information about our products. We are therefore committed to providing appropriate and balanced information to physicians and other healthcare providers about our medicines and vaccines, and about our ongoing research. And we interact continually with physicians, healthcare professionals and researchers to conduct research and clinical trials, to share information and to gain new perspectives on needs and opportunities. For more information on our interactions with these stakeholders, please **click here**.

Payers

We are aware of payers' concerns over rising healthcare costs and limited budgets, and of the debates on how to make medicines and vaccines more affordable and accessible. We work with payers worldwide to make sure they understand that the prices of our products reflect their true value. We also develop programs with payers to make sure our products can reach the people who need them most. **Learn more**.

Governments, Multilateral Organizations and Regulators

We are committed to conducting our business according to the letter and spirit of the law and regulations, as well as the various standards of business practice that we endorse. When laws or regulations do not exist or are inadequate, we have created our own standards and use these to guide our practices.

We work with policy makers, legislators, multilateral organizations and governments worldwide to ensure that policy and regulatory environments globally, nationally and locally foster patient access to medicines and vaccines, and that they are conducive to ethical business practices, science and innovation. **Learn more** about our public policy and advocacy positions.

Our Ethical Business Practices

As outlined in *Our Values and Standards*, when making donations or contributions or when offering sponsorships, Merck managers are required to consider the following:

- Is the donation permitted under applicable law or regulations?
- Who is the ultimate beneficiary of the donation?
- Will the donation benefit society by increasing awareness of ways to improve health and well-being and by enhancing research into diseases?
- Is the recipient in a position to influence the company's business, and therefore would the donation affect or be perceived to affect the decision-making process? (We seek to preserve the independence of those individuals and groups with which we work. Donations are not made with the intent of obtaining inappropriate business influence.)
- Is the recipient a government institution or individual employed by the government? (The company does not make payments or provide benefits to government officials or employees to obtain or retain business. Merck has a robust evaluation and approval process in place for any payment made or benefit given to a government official to ensure there is no conflict or potential perceived conflict of interest.)

Shareholders

We strive to create shareholder value by identifying opportunities to meet customer needs and by managing our business responsibly to achieve superior financial results over the long term. To this end, we measure and report our performance—on financial and other parameters—honestly and accurately, and we work hard to protect and retain our assets, including our intellectual property rights, our resources, our top employees and our reputation.

Merck also reports on environmental, social and governance indicators that are relevant to our business and long-term performance—and we support efforts to standardize nonfinancial reporting. For information related to investing in Merck, please **click here**.

Issue Experts

We work hard to identify the best organizations and individuals to work with, in order to address societal challenges and to inform debates on pressing issues. Merck has decades of experience in developing partnerships, especially those focused on improving

global health. Such partnerships are driving the evolution of private-sector involvement in meeting societal challenges.

Our partnerships include a variety of ventures, with a range of participants and priorities—from small collaborations focused on distributing one type of medicine to larger entities fighting a disease. Our objectives for health partnerships might include developing a medicine or vaccine, distributing a donated or subsidized product, or strengthening health services. For more information on our public-private partnerships, please **click here**.

Communities Where We Operate

We strive to make a positive contribution to local communities through responsible and safe operations and through our philanthropy and employee volunteer efforts. Our objective is to develop culturally appropriate mechanisms to engage and build relationships with our local community stakeholders.

Some Merck sites have created community review boards, which meet regularly; others host neighborhood or town hall meetings to seek input from community members. In the case of a new facility, site expansion or a major capital project, we meet with community stakeholders to consider the potential impact of our plans—whether direct or indirect—and to factor community opinions and concerns into the planning process from an early stage. For more information on our contributions to communities, please **click here**.

Environmental Stakeholders

We work to reduce the environmental impacts of our operations and products and to promote sustainable environmental practices within the company, by our partners and throughout our supply chain. For more information on our environmental performance, please **click here**.

Employees

Because the talent, diversity and integrity of our people drive our success, we are committed to discovering more ways to create a workplace where our employees—and our business—can thrive.

We recognize the challenge of balancing professional achievement and personal well-being. To this end, we work hard every day to foster a positive working environment for our employees by providing resources to improve their health and that of their families, opportunities for professional development, and more opportunities to get involved in the communities where they live. For more information on Merck's employee relations, please **click here**.

Suppliers and Business Partners

We seek out the best suppliers and partners with whom to research, develop, produce and distribute our medicines and vaccines and to perform commercial services. We strive to engage a diverse supplier base and foster responsible approaches on the part of suppliers regarding labor, employment, health and safety, ethics, diversity and protection of the environment. For more information on Merck's approach to supply chain management, please **click here**.

Industry Associations

Merck engages with stakeholders through numerous organizations of which we are members. Within these groups, we aim to inform related debates in ways that are constructive and that ultimately foster improved access to medicines and vaccines globally. For a list of our memberships, please **click here**.

Engagement Mechanisms

In 2011, Merck used various mechanisms to engage stakeholders, ranging from one-on-one discussions, surveys and expert input forums to informal discussions during conferences and meetings. The engagement helped to inform our strategy and actions on a number of issues including:

- **HIV access strategy**
- **Emerging market vaccines**
- **Medicines patent pool**
- **Transparency of political advocacy and lobbying activities**
- **Involvement in trade associations**

- **Climate change**
- **How Merck can support the global effort to reduce maternal mortality**
- **Pharmaceuticals in the environment**
- **Access to water**
- **U.S. healthcare reform**
- **Sales and marketing practices**
- **Antimicrobial resistance**
- **Nanotechnology**
- **Neglected tropical diseases**

Stakeholder input contributed to the development of the following:

- Public policy positions on clinical trials in the developing world, antimicrobial resistance, nanotechnology and various aspects of intellectual property protection, including patent-term extensions, patent linkages, regulatory data protection, intellectual property and access to medicines in the developing world
- Merck's global human rights policy
- Merck's Business Partner Code of Conduct
- Merck for Mothers, a 10-year, $500 million commitment to reduce maternal mortality announced in September 2011
- A new HIV access initiative
- A sustainable business model in sub-Saharan Africa
- Greater disclosure related to our **public policy and political advocacy efforts**

OUR ACTIONS ARE GUIDED BY THE VOICES OF LEADING EXPERTS, INCLUDING THOSE ON THE FRONT LINES.

In September 2011, we joined the global effort to reduce maternal mortality by launching Merck for Mothers. Building on our legacy of tackling urgent global health challenges such as river blindness, HIV/AIDS and hepatitis, Merck for Mothers aims to create a world where no woman has to die giving life. It is a 10-year commitment to bring this issue to the forefront of global consciousness, develop new technologies and speed lifesaving solutions to women across the globe.

While substantial progress has been made in reducing maternal mortality globally in the past 20 years, we are still losing too many mothers, and more needs to be done. Our first commitment to addressing maternal mortality was to listen and learn. The Merck for Mothers strategy emerged from consultations with hundreds of global health experts, who helped ensure that our approach was informed, comprehensive and complementary to maternal health efforts already under way. **Learn more** about Merck for Mothers.

WORKING WITH PATIENT GROUPS

Merck's mission is to continue to improve the health of people through the discovery, development and marketing of innovative products that contribute to the quality of life.

Despite significant medical advances in many therapeutic areas, many countries have made limited progress in their level of patient treatment and in providing broad-based access to available therapies. This situation arises in part from the tension between the best clinical practices (as defined by evidence-based medicine) and the pressures of cost containment in publicly financed health systems.

In this context, we believe that our contributions to organizations, such as patient groups and health-related charities and nongovernmental organizations (NGOs), are fundamental to our goals and corporate responsibility. Because of the gaps in patient care in such areas as vaccination, heart disease, HIV, hepatitis C infection and other chronic conditions, there is a compelling need for the pharmaceutical industry to work more closely with patient organizations to improve access to accurate, balanced and reliable information about diseases and available therapies.

Practices

Merck has a long history of collaboration with patient groups and health-related charities in areas that are relevant to our business, including knowledge and understanding of diseases and treatment options, and information and decision-making among consumers in healthcare.

Because we recognize the legal and reputational risks of inappropriate donations or sponsorships, we have policies and management systems in place to ensure the integrity of our practices. We also comply with all applicable laws and regulations.

Principles

Because patients are at the core of health systems, it is especially important to support, or to develop appropriate programs and projects, with patient societies and associations. We believe in collaborating with healthcare stakeholders—including government and other payers, healthcare providers and patient organizations—to support programs that aim to improve patient education and patient care in therapeutic areas where we have expertise.

That's why we support and participate in programs that help patient organizations increase disease awareness and improve access to medicines and better healthcare. And we work with patient organizations to disseminate and share quality medical, scientific and pharmacoeconomic information, consistent with legal and regulatory obligations and with respect for their independence.

Decisions to contribute funding to patient societies are dependent on:

- A written description explaining how the funding will advance educational and disease-awareness objectives
- An internal review by relevant Merck groups
- The consistent application of Merck policies and procedures, including those related to contributions; advertising and promotion; sales and marketing; and to our ethical business practices as outlined in *Our Values and Standards* guide

We believe that patient organizations should be free to seek funding from all appropriate sources, including governments, associations and companies, to increase disease awareness and obtain improved access to medicines and better healthcare. We adhere to all guidelines and regulations that are relevant to relationships with patient organizations and to the provision of information about diseases and available therapies in individual countries.

In 2012, in response to recent stakeholder feedback, we will continue to explore ways to expand our stakeholder engagement processes, build trust with stakeholders, and identify opportunities to gain and share insights with key stakeholders on relevant corporate responsibility issues.

ABOUT THIS REPORT

As part of our commitment to be transparent about our corporate responsibility initiatives, including our business activities and operations, we report on our performance annually on this website.

This report covers Merck's corporate responsibility performance during 2011, with some additional information relating to 2012.

Where possible, we link readers to further information on **Merck.com** and in our **annual financial reports**.

We have used several external guidelines and measurement frameworks to inform the scope of our reporting. These include the **Global Reporting Initiative (GRI) G3.1 Guidelines**, the **Access to Medicine Index**, the **Millennium Development Goals**, and the 10 principles of the **U.N. Global Compact**. We are pleased to have achieved a reporting level A on the GRI G3.1 Guidelines, and our self-assessment has been checked by the GRI.

Data in this report relate to worldwide operations for the calendar year 2011, except where stated. We plan to publish our next comprehensive corporate responsibility report in 2013.

We also have published a brochure of 2011 highlights. Please visit **MerckCR.com** for an interactive version, or visit the **downloads & media section** of this website to view or print a copy of the brochure.

OUR BUSINESS

From developing new therapies that treat and prevent disease to helping people in need, we're committed to improving health and well-being around the world.

Our vision is to make a difference in the lives of people globally through our innovative medicines, vaccines, biologic therapies, consumer health products and animal products. We aspire to be the best healthcare company in the world and are dedicated to providing leading innovations and solutions for tomorrow.

We have made it our mission to provide innovative, distinctive products and services that save and improve lives and satisfy customer needs; to be recognized as a great place to work; and to provide investors with a superior rate of return.

Our product offering categories include heart and respiratory health, infectious diseases, sun care and women's health. We continue to focus our research on conditions that affect millions of people around the world—such as Alzheimer's, diabetes and cancer—while expanding our strengths in such areas as vaccines and biologics.

We also devote extensive time and energy to increasing access to medicines and vaccines, through far-reaching programs that donate and deliver our products to the people who need them.

At Merck, we're applying our global reach, financial strength and scientific excellence to do more of what we're passionate about: improving health and improving lives.

Vaccines

Vaccines are one of the greatest public health success stories of the 20th century, and Merck has played its part in that story.

We are one of only a few companies that remain dedicated to the complex business of researching and producing vaccines. Our unique contributions include the development of vaccines that help prevent now-rare diseases, such as measles and mumps, as well as diseases such as shingles and cervical cancer.

Animal Health

Through Merck's animal health business, we are a global leader in the research, development, manufacturing and sale of veterinary medicines.

We offer a broad choice of vaccines, anti-infective and antiparasitic drugs; a complete range of fertility-management and pharmaceutical specialty products; innovative delivery systems; and performance technologies and value-added programs, such as pet-recovery services and livestock-data-management tools. **Learn more**.

Consumer Care

Through our consumer health products, we strive to enhance the quality of life for people and their families around the world.

Each day, millions count on one or more of our industry-leading brands to help prevent or treat various common conditions. These brands include such household names as CLARITIN® for allergies, COPPERTONE® for sun care and DR. SCHOLLS® for foot care.

Pipeline

Merck has a robust pipeline, with a wide range of product candidates across each phase of development. View **our pipeline**.

ECONOMIC IMPACT

Sustainable business success depends on making quality products that people value through sound financial stewardship and responsible governance that ensures we are meeting customers' needs ethically and transparently.

Globalization and the expanding reach of firms during the past decades have escalated expectations for multinational enterprises to create more social value beyond compliance with regulations, philanthropy. Corporate responsibility has emerged as an important element of the private sector's response to these expectations and demands. While it can be seen as a way to improve one's reputation, or simply as a response to a moral imperative to do good, at Merck we believe that corporate responsibility is critical to our business success and can provide us with new opportunities to create shared value.

Our principal economic contribution to society is made through the discovery, development, manufacturing and marketing of our products, which directly improve and maintain the health of individuals and communities around the world, helping them to lead more productive lives.

During the past year, we made significant progress in strengthening and transforming Merck. We are competing amid a fast-changing healthcare environment and a complex global economy. Our underlying product portfolio is among the broadest in the healthcare industry. Through continued emphasis on growing the core of our business and successfully launching new products coming out of our late-stage pipeline, Merck's pharmaceutical sales increased 5 percent in 2011. For more information on our sales in 2011, **click here**.

Merck's **research pipeline** illustrates the progress of our discovery efforts. The company currently has a number of candidates under regulatory review in the United States and internationally. An update on Research and Development can be found in the company's **Form 10-K**.

During 2011, the company continued the advancement of drug candidates through its pipeline. VICTRELIS™ (boceprevir), the company's innovative oral medicine for the treatment of chronic hepatitis C genotype 1, was approved by the FDA and the European Commission (EC). The FDA also approved JUVISYNC™ (sitagliptin and simvastatin), a new treatment for type 2 diabetes that combines the active ingredient in the glucose-lowering medication JANUVIA® (sitagliptin) with the cholesterol-lowering medication ZOCOR® (simvastatin). In addition, the EC approved ZOELY™ (nomegestrol acetate/17ß-estradiol), a monophasic combined oral contraceptive tablet for use by women to prevent pregnancy. CUBICIN® (daptomycin for injection), an antibacterial agent with activity against methicillin-resistant *Staphylococcus aureus* ("MRSA") for which the company has licensed development and distribution rights in Japan, was approved for use in that country.

During 2011, the company also received additional indications for several of its existing products. The FDA approved an expanded age indication for ZOSTAVAX® (Zoster Vaccine Live), a vaccine to help prevent shingles (herpes zoster), to include adults ages 50 to 59. SYLATRON™ (peginterferon alfa-2b) was also approved for the adjuvant treatment of melanoma in patients with microscopic or gross nodal involvement. Also, SIMPONI® (golimumab), which Merck co-markets in the EU, received an indication in the EU for use in combination with methotrexate in adults with severe, active and progressive rheumatoid arthritis not previously treated with methotrexate, having been shown to reduce the rate of progression of joint damage as measured by X-ray and to improve physical function.

In addition, we continue to return value to shareholders in the form of dividends and share repurchases. For additional information about our business and economic impact, please see our **Form 10-K** for the year ended December 31, 2011.

SUPPORTING OUR COMMUNITIES

Merck contributes substantial economic and social value to the countries and communities in which we operate.

Through our local research, manufacturing and sales operations; by purchasing products and services from numerous and diverse suppliers; and by investing in community infrastructure; we generate skilled-employment opportunities and market activity that directly and indirectly drive income and economic growth. Through our research activities, Merck contributes to local R&D capacity in the life sciences sector, which is critical to building national competitiveness in the 21st century. By granting licenses for our products and our technical know-how to small and medium-size companies, we contribute to their growth and to the local scientific knowledge base. Through our national and local tax payments, we help support government-financed pensions, health systems and local infrastructure.

As of December 31, 2011, Merck (including its Banyu subsidiary in Japan) had a physical presence in 80 countries, with 597 research, manufacturing, sales and administrative sites. In all of these locations, we recognize that our success depends in large part on our relationships and interactions with local communities, including elected officials, business and community leaders, charitable organizations, neighbors, educators, local media and our employees.

Merck aspires to have a positive effect on the communities in which we operate worldwide, and we recognize our responsibility toward those affected directly or indirectly by our operations and activities. We rely on local communities not only for our workforce but also for some of our suppliers and for our ability to do business. Through ongoing engagement and dialogue, we work to understand the concerns and needs of our communities, and we seek to respond by addressing local challenges in ways that build stronger communities and support the sustainability of our business.

We contribute to our communities in three key ways:

- Direct and indirect economic contributions, such as employment, training, support of local suppliers and local R&D, and paying taxes
- Managing our community impacts—for example, by ensuring confidence in environmental and safety performance and respecting human rights
- Addressing community needs through philanthropy and community involvement

Underlying our community approach is our commitment to respect human rights. As a signatory to the United Nations Global Compact, we are committed to protecting and promoting fundamental human rights not only within our immediate workforce but also within our broader sphere of influence, including within our local communities. Learn more about our commitment to protecting and promoting fundamental **human rights**.

AWARDS & RECOGNITION

The following are highlights of recent awards for and recognition of Merck's comprehensive approach to corporate responsibility.

GLOBAL RECOGNITION

Access to Medicine Index
Merck ranked No. 2 on the 2010 Access to Medicine Index, which assesses pharmaceutical companies on 106 criteria around global access to medicines. Merck ranked No. 1 in the category of Philanthropy.

Dow Jones Sustainability Index
For the third year in a row, Merck has placed on the Dow Jones Sustainability North America Index, which is based on a thorough analysis of corporate economic, environmental and social performance. The North America Index captures the leading 20 percent of firms (in terms of sustainability) out of the largest 600 North American companies.

FTSE4Good Index
Merck is a FTSE4Good constituent member. The FTSE4Good Index Series measures the performance of companies that meet globally recognized corporate responsibility standards.

Corporate Responsibility Magazine
Merck ranked No. 46 on CR's 12th Annual 100 Best Corporate Citizens List, which rates companies on their performance in seven key areas: environment, climate change, human rights, philanthropy, employee relations, financial performance and governance.

The Chronicle of Philanthropy
Merck ranked No. 3 in corporate donations of cash and products in *The Chronicle of Philanthropy*'s 2011 Corporate Giving Survey.

U.S. Corporate Boards Study
In a study published by James Drury Partners that ranked boards of the 500 largest U.S. companies based on the number and experience of their directors, Merck was shown to have one of the most capable boards of directors in corporate America.

American Chamber of Commerce
MSD* Ecuador was recognized by the American Chamber of Commerce with the "Annual Distinction in Corporate Responsibility," an important recognition of best practices in social responsibility meant to encourage and disseminate best practices among Ecuadorian companies.

Maclean's/Jantzi-Sunstainalytics
Merck was named one of the 50 Most Responsible Corporations in Canada on the 2011 Maclean's/Jantzi-Sunstainalytics list. Companies were selected on the basis of their performance across a broad range of environmental, social and governance (ESG) indicators tracked by Sustainalytics.

Hong Kong Council of Social Service
MSD* Hong Kong was recognized as a "Caring Company" by the Hong Kong Council of Social Service (HKCSS) for the tenth consecutive year. The Caring Company Movement was launched in 2003, during the period of the SARS epidemic, to encourage corporations to demonstrate good corporate citizenship by conducting more community-related work.

Association of PR Professionals and Media of Serbia
MSD* Serbia received the award for the best non-profit campaign/project for its Serbian Childhood Asthma Network (SCAN) from the Association of PR Professionals and Media of Serbia.

ACCESS TO HEALTH

Chinese Ministry of Civil Affairs
The China-MSD HIV/AIDS Partnership (C-MAP) was presented with the "Most Influential Charity Program" award by the Chinese Ministry of Civil Affairs. The award recognizes individuals and organizations that have made significant contributions to public welfare and charity work in China. Merck was the only multinational pharmaceutical company to win the honor in 2011.

***Fast Company* Magazine**
Merck Consumer Care was named to *Fast Company*'s 2011 10 Most Innovative Consumer Product Companies list for its Dr. Scholl's® Custom Fit™ Orthotic Centers with FootMapping™ technology.

Genome Valley Excellence Award
MSD* India received the Genome Valley Excellence Award from the Indian state of Andhra Pradesh at the BioAsia conference. This award for vaccine excellence validates the work being done within the emerging markets organization in support of the company's growth strategy.

***Bio-IT World* Magazine**
Merck was one of the grand-prize winners of Bio-IT World's Best Practices awards program recognizes organizations for their outstanding innovations and excellence in the use of technologies, practices, and novel business strategies to advance drug discovery, development, biomedical research and clinical trials.

ENVIRONMENTAL SUSTAINABILITY

Maplecroft Climate Innovation Index
Merck was ranked 45th out of 100 (and 17th among the top 100 U.S. companies) in the Maplecroft Climate Innovation Index in 2011. The index identifies global companies that demonstrate superior management, mitigation and adaptation in climate innovation.

U. S. Environmental Protection Agency (EPA) ENERGY STAR
Merck received an ENERGY STAR Sustained Excellence Award in both 2011 and 2012 from the EPA for its continued improvement in energy performance and leadership in energy management in both the pharmaceutical and industrial sectors. ENERGY STAR designations have been earned at six manufacturing sites as well as at Merck's corporate and research headquarters:

- The Stonewall, Wilson and Barceloneta manufacturing sites achieved the ENERGY STAR Challenge for Industry award for reducing energy use by more than 10 percent in the previous three years.
- The Cleveland, Tennessee; Elkhorn, Nebraska; and Las Piedras, Puerto Rico; manufacturing sites achieved an ENERGY STAR award for ranking in the top 25 percent of energy performance at pharmaceutical plants nationwide
- Corporate headquarters in Whitehouse Station also qualified for the ENERGY STAR label for the third time, and research headquarters in Upper Gwynedd qualified for the first time

Merck, an ENERGY STAR partner since 1995, has been recognized by the EPA for seven consecutive years—twice as Partner of the Year and now, for the fifth time, for Sustained Excellence.

***Newsweek* Green Ranking**
Merck has appeared on *Newsweek*'s Green Rankings list ever since it was first published, in 2009. The Green Rankings assess companies' environmental footprint (including greenhouse gas emissions and water use); environmental management (including environmental policies, programs and initiatives); and disclosure (including company reporting and involvement in transparency initiatives).

EMPLOYEES

DiversityInc.com
Merck ranked No. 15 on DiversityInc.com's annual list of the Top 50 Companies for Diversity in 2011, the leading assessment of diversity management in corporate America and globally.

Fortune
Fortune ranked Merck the 2nd Most Admired Company within the Pharmaceutical Industry on its annual list of the World's Most Admired Companies in 2011. Merck had the largest positive advancement of any company within the industry, and moved up five positions or more in rankings for People Management, Quality of Management, Financial Soundness and Global Competitiveness.

***CAREERS & the disABLED* Magazine**
Merck was named a Top 50 Employer by *Careers & the disABLED* magazine in 2011. Readers of the magazine were asked to name the employers, in both the private and public sectors, for whom they would most like to work or that they believe would provide a progressive environment for people with disabilities.

Human Rights Campaign Corporate Equality Index
Merck scored a perfect 100 on the Corporate Equality Index 2011: Rating American Workplaces on Lesbian, Bisexual and Transgender Equality.

***Working Mother* Magazine**
Merck was named to the 2011 *Working Mother* magazine's 100 Best Companies list. This is the sixth consecutive year Merck has earned placement on the list, which recognizes companies dedicated to providing employees with benefits, including career advancement, childcare, flexible work arrangements and leave for new parents.

The Garden State Equality (New Jersey)
Merck was named to the Garden State Equality's "Equality Companies of the Year" list in 2011. The NJ civil rights organization supports lesbian, gay, bisexual and transgender (LGBT) issues and recognizes companies that lead the way not only in their commitment to equality and diversity for their own employees, but also in the world at large.

National Association for Female Executives (NAFE)
Merck was listed among NAFE's Top 50 Companies for Executive Women in 2011 and 2012. The NAFE list recognizes American corporations that have promoted women into top executive positions and created a culture that identifies, promotes and nurtures successful women.

ETHICS & TRANSPARENCY

CPA-Zicklin Index of Corporate Political Disclosure and Accountability
Merck was one of four companies to score a perfect 100 in the inaugural CPA-Zicklin Index of Corporate Political Disclosure and Accountability, released by the Center for Political Accountability. The Index provides the first comprehensive portrait of how S&P 100 companies are navigating political spending, in terms of both disclosure and board oversight.

* Merck is known as MSD outside of the United States and Canada.

ACCESS TO HEALTH

Millions of people in both developed and developing countries are living longer, more productive lives due, in part, to better healthcare and access to innovative medicines and vaccines.

Better healthcare, in combination with myriad technological advances, is also helping to strengthen the economic development of many individuals and countries, but many are still excluded as a result of poverty, lack of education, discrimination and other complex factors.

It is unacceptable that the vast majority of people around the world are unable to benefit from advances in medicines and healthcare. As a global healthcare company, Merck believes it has an important role and responsibility in improving access to medicines, vaccines and quality healthcare worldwide. To help address this challenge, we are committed to discovering smart, sustainable ways to expand access to healthcare, which is also necessary to sustain our business in the longer term.

The enormity of this challenge, however, is far greater than our ability alone to address it. Barriers to quality care and medical treatment—such as lack of trained healthcare professionals, weak infrastructure, civil strife and a shortage of safe drinking water in many parts of the world—make even basic healthcare delivery difficult at best. We believe our role is to work in partnership with others—governments, donors, patient organizations, healthcare professionals, nongovernmental organizations (NGOs), multilateral organizations and others in the private sector to lend our expertise and knowledge. We also have an important role to play through our public policy and outreach efforts, to advocate for changes that will improve access. **Learn more**.

In addition, we are implementing a multipronged strategy to improve access to medicines and vaccines—examining our approach to research and development, manufacturing and supply, registration, commercialization and community investment. To guide our efforts in these key areas of activity, we follow our companywide **Access to Health Statement of Guiding Principles**, to ensure we are striving to expand access in innovative ways on an ongoing basis.

Research and Development

Merck is actively engaged in R&D to provide medicines and vaccines that address vital global health needs. Merck believes that advances in both scientific development and access strategies will come from initiatives that involve multiple players with unique expertise. **Learn more**.

Manufacturing and Supply

Merck is committed to providing patients and customers with high-quality products and a reliable supply of safe and effective medicines and vaccines. **Learn more**.

Registration

Merck is committed to registering our medicines and vaccines in a timely fashion in markets where they are needed. A major goal is to reduce the historic gap in product introduction between developed and developing countries. **Learn more**.

Commercialization

Merck strives to commercialize its products in a way that meets local needs responsibly and efficiently. For example, through our worldwide differential-pricing frameworks, we are committed to making our medicines and vaccines more affordable to more people by applying a differential-pricing approach that takes into account level of economic development, channel and public health need. **Learn more**.

Community Investment

We recognize that we cannot address complex public health challenges on our own; therefore, we engage in community investment to address the barriers to access where we believe we can make the strongest contribution. **Learn more**.

We do not have all the answers to the access challenge, so we spend significant time with external stakeholders who have other perspectives and experience. By listening to and working with groups such as the GAVI Alliance, UNICEF, UNAIDS, Project HOPE, Médecins sans Frontières (MSF) and Oxfam, we learn a great deal about how we can do more and move toward our common goal of facilitating greater access and, ultimately, saving lives.

We understand that various stakeholders are also calling on the global pharmaceutical industry to provide greater transparency about the impact of access strategies and initiatives as well as evidence of how access strategies are integrated into an overall business strategy. In response, we develop and report on **key performance indicators** and articulate the business case for our overall approach, as reflected in our Access to Health Statement of Guiding Principles.

We also recognize a need for relevant industry-specific indicators that will allow comparisons across the industry. Such indicators are beginning to be developed. One example is the Access to Medicine Index (ATMI), which ranked Merck No. 2 in its 2010 Index. Merck believes that the ATMI represents an important first step in this process, but more work is needed to ensure that all indicators are relevant and provide true measures of corporate responsibility. Toward that end, we remain committed to working with the ATMI and other organizations, including the Global Reporting Initiative (GRI), to develop meaningful measurements for our industry.

RESEARCH & DEVELOPMENT

Medicines discovered and developed by Merck scientists save and improve countless lives around the globe.

In the past 60 years, innovative medicines and vaccines have helped to dramatically improve public health and the economic well-being of societies and individuals in many countries.

As a result of such biomedical advances and increasing economic prosperity, diseases that were prevalent 100 years ago, such as smallpox and polio, have all but disappeared. The global burden of illness looks very different today, and the World Health Organization projects that it will be different again in 20 years.

Merck is committed to addressing medical needs through scientific excellence: Research and development expenses were $8.5 billion in 2011, $11.0 billion in 2010, and $5.8 billion in 2009. The talent of our scientists, combined with the dramatic scientific and technological advances of the past decade, has led to an exciting period of Merck research as we seek new and more-effective ways to treat diseases.

Merck's research philosophy is based on satisfying unmet medical needs globally. In assessing our research priorities, we also explore the scientific and commercial feasibility of conducting research with the potential to develop a product that is useful, considering available knowledge, theories, technologies and skills. Our R&D is focused on the following six disease areas:

- Cardiovascular Disease
- Diabetes and Endocrinology (including Women's Health)
- Neuroscience and Ophthalmology
- Oncology
- Infectious Diseases
- Respiratory and Immunology

We pursue therapies in a variety of modalities, from small molecule and vaccines to biologics (peptides, small proteins, antibodies) and RNAi (RNA Interference—a method of selectively silencing genes).

Merck Research Laboratories (MRL) commits resources to discover and develop innovative products that save and improve lives around the world, and to deliver the most value to our customers. Our products and research priorities are aligned with the current and projected global burden of disease as defined by the World Health Organization (WHO), as well as with the increasing need for new therapies targeted to treatment-resistant diseases, such as the Hepatitis C virus.

Merck is committed to research in specific therapeutic areas and to clinical development in support of new products. We maintain several long-term exploratory and fundamental research programs in biology and chemistry, as well as research programs directed toward product development. **Learn more**.

With the complex challenges of bringing important new drugs to our patients while simultaneously controlling the rising costs of innovation, Merck is also leveraging important new clinical and quantitative tools that help us rapidly differentiate between drugs that will clearly meet patient needs and those that will not.

A focus on translational medicine is critical to these efforts, enabling us to develop biomarkers—those characteristics that can be objectively measured and evaluated as an indicator (or marker) of normal biologic processes, disease or responses to therapy. Since biomarkers provide critical information in the drug discovery and development process, our intent is to apply them very early in the development of novel therapeutic candidates (Phase 1, if possible), to provide preliminary evidence for potential benefit before proceeding with further development.

In addition, Merck is using novel quantitative approaches to leverage what we learn from our preclinical experiments to inform our clinical trials, and to develop models based on

published literature. By integrating our knowledge from these sources, we can develop mathematical models that allow us to explore possible clinical trial scenarios. Instead of running a single clinical trial, we first simulate the trial thousands of times, exploring the impact of different factors influencing the disease, the patient population, and efficacy and safety response.

With this integrated approach we can optimize the next phase of clinical trials, and, importantly make pivotal decisions earlier and more confidently, increasing productivity and improving the probability of success. By eliminating likely failures sooner and focusing on those mechanisms that appear more promising, we believe we will bring innovative products to patients faster, while still maintaining a rigorous focus on scientific excellence and safety.

We also recognize that one individual or company cannot successfully develop drugs single-handedly. Most cases of true innovation come from robust and honest collaboration among individuals with diverse backgrounds and capabilities joined together by the idea of changing the course of human health. As part of our R&D strategy, therefore, we continue to pursue appropriate external licensing and partnering opportunities. In this regard, Merck Research Laboratories (MRL) establishes significant external alliances to accelerate drug discovery and development, improve R&D productivity, and successfully commercialize novel therapeutics and vaccines.

Pipeline

Merck's research pipeline[1] illustrates the progress of our discovery efforts. The company currently has a number of candidates under regulatory review in the United States and internationally. An update on Research and Development can be found in the company's **Form 10-K Report**.

"Innovation is the centerpiece of our growth strategy at Merck. We continue to make significant progress on our strategy to drive growth from our existing portfolio and to bring forward breakthrough medicines and vaccines that address unmet medical needs and return significant value to our shareholders."

Kenneth C. Frazier
Merck President & CEO

Governance of Our Research Agenda

The Research Leadership Team, headed by the executive vice president and president, Merck Research Laboratories (MRL), develops the divisional strategy, allocates resources and manages the portfolio of MRL products. The Research Leadership Team is made up of the heads of six functional areas within MRL. Each area provides expert, efficient support of our drug candidates—ushering them from drug discovery through product life-cycle management.

Code of Conduct

All Merck employees must abide by our **Code of Conduct**, which also applies to the way we work with external researchers, doctors and academics. According to Merck's Guiding Principles for Business Practices Involving the Medical and Scientific Community, all activities involving the medical and scientific community that are sponsored or supported by Merck, including our subsidiaries, should have a well-articulated business purpose. In addition, all activities should be implemented in accordance with the highest standards of ethics and integrity, having the utmost regard for patient health and safety.

Research Misconduct

In accordance with MRL policy, Merck does not tolerate fraud or misconduct in our research activities—whether by an employee or an external business partner. Merck deals promptly, directly and appropriately with all reported cases. MRL policy is aligned with Merck's policy on **Reporting and Responding to Potential Company Violations**.

MRL Compliance

To help ensure compliance, Merck has clearly articulated policies in place to provide guidance to employees on ethical and lawful conduct. However, every employee has a stake in the company, and it is each employee's responsibility to conduct him or herself ethically and lawfully.

Merck's compliance program is based on Chapter Eight of the U.S. Federal Sentencing Guidelines, Sentencing of Organizations, as amended, which sets forth the elements of an effective compliance program, as well as more specific guidance for the pharmaceutical industry issued by the Office of the Inspector General in 2001. For more information on Merck's compliance programs, click **here**.

In January 2002, the company's Compliance Charter allocated responsibility and accountability for compliance to the divisional level. Therefore, each division established its own compliance committee to tackle specific divisional issues and requirements.

The MRL Compliance Committee Charter has as its stated objective to "ensure ongoing compliance with applicable laws and requirements in all MRL business areas through appropriate management structure, processes and training." To manage compliance in MRL, the committee has a core cross-functional team representing the key functional areas within MRL. In this way, compliance efforts encompass the entire division and go beyond compliance with clinical trial conduct.

The MRL Compliance Committee also promotes ethical science and provides guidance to MRL employees on Merck Standards and Corporate Policies, as well as on the necessary education on specific requirements applicable to the research community.

Product Safety

Safety is our highest priority. We rigorously study our products and work with regulators and healthcare professionals over many years to characterize their safety profiles. Initially, test compounds are evaluated in the laboratory. If they pass stringent laboratory tests, the compounds move into next-stage testing in animals. Only a few compounds ever make it this far. If the compound makes it through this stage of testing, we then begin **clinical development** in which multiple studies are conducted over several years.

Clinical testing begins in Phase I in a small number of people and progresses through Phase III in which the safety and efficacy of a medicine is confirmed. If the clinical studies are successful, we submit extensive documentation and data to regulators in a product-licensing application. Before approving a medicine or vaccine for use, regulators scrutinize these extensive data and analyses. Even after a product is approved, we continue to actively monitor the safety of our medicines and vaccines in various ways, including through post-marketing studies. If we identify safety issues following a product's approval, we work closely with the regulatory authorities to communicate promptly and appropriately with healthcare professionals and patients.

Pediatric Formulations and Indications

We are including pediatric clinical trials in the company's new drug and vaccine development strategies worldwide, in response to unmet clinical needs, where relevant. And, where appropriate, we will seek approval for pediatric indications and develop age-specific formulations. In 2010, Merck established an internal Pediatric Development Advisory Committee to review and provide input into all pediatric development strategies across various therapeutic areas. It serves as a center of excellence within Merck to consult on pediatric development issues and key pediatric policy questions. For a listing of all of our pediatric clinical trials, click **here**.

"I believe there is before us a wider field of the unknown than all that is behind us. Based on knowledge already developed, there are many ideas to be discovered. The still-greater progress to come will depend on fine intellects, inspiration and the efforts of both those who teach and those who benefit from such teaching. It also will depend upon the business and industrial world and upon teamwork on all fronts with, above all, a genuine and active interest in the welfare of humanity."

George Merck
Founder, Merck

PERFORMANCE & COMMITMENTS

Merck gained the following approvals* in 2011–2012:

- In February 2012, the U.S. Food and Drug Administration (FDA) approved ZIOPTAN® (tafluprost), an ophthalmic solution for reducing elevated intraocular pressure in patients with open-angle glaucoma or ocular hypertension. Also in February 2012, the FDA approved JANUMET XR®, which combines JANUVIA® with extended-release METFORMIN®, and is a once-daily option to treat type 2 diabetes.
- During 2011, the company continued the advancement of drug candidates through its pipeline. VICTRELIS®, the company's innovative oral medicine for the treatment of chronic hepatitis C, was approved by the FDA and the European Commission (EC). The FDA also approved JUVISYNC®, a new treatment for type 2 diabetes that combines the active ingredient in the glucose-lowering medication JANUVIA with the cholesterol-lowering medication ZOCOR®. In addition, the EC approved ZOELY®, a monophasic combined oral contraceptive tablet for use by women to prevent pregnancy. CUBICIN®, an antibacterial agent with activity against methicillin-resistant *Staphylococcus aureus* ("MRSA"), for which the company has licensed development and distribution rights in Japan, was approved for use in that country.
- The company also received additional indications for several of its existing products. During 2011, the FDA approved an expanded age indication for ZOSTAVAX®, a vaccine to help prevent shingles (herpes zoster), to include adults ages 50 to 59. In addition, the FDA approved SYLATRON® for the adjuvant treatment of melanoma in patients with microscopic or gross nodal involvement. Also, SIMPONI®, which Merck co-markets in the EU, received an indication in the EU for use in combination with methotrexate in adults with severe, active and progressive rheumatoid arthritis not previously treated with methotrexate, having been shown to reduce the rate of progression of joint damage as measured by X-ray and to improve physical function.

*Reflects the Merck research pipeline as of February 21, 2012.

R&D SUMMARY	2009[1]	2010	2011
Total investment in R&D (US$B)[2]	5.8	11.0	8.5
Employees in Merck Research Laboratories*	17,200	15,500	14,100
Number of new products approved	1	3	3
Number of products in the pipeline and under regulatory review	47	43	34
Established significant external licenses	51	46	52
Percentage of top 20 global burdens of illness addressed by our products and pipeline[3]	53	53	53
Filed U.S. patent applications	308	220	223

[1] Amounts for 2009 include the impact of the merger with Schering-Plough Corporation on November 3, 2009.
[2] Research activities and investments include all Merck divisions.
[3] As defined by WHO and excluding accidents, premature birth and self-inflicted injuries

Patents

Merck filed 223 original U.S. patent applications in 2011. The number of U.S. patents granted to Merck during that same period was 298. Many of these patents were related to compounds in various stages of development. The number of filings and patents granted demonstrates the extent of innovation taking place at Merck Research Laboratories.

PARTNERSHIPS

Merck supports academic and community-based physicians and researchers to expand clinical and scientific knowledge and improve the understanding of the appropriate use of Merck products.

To this end, Merck supports requests from the external scientific community by providing drug, funding and/or human resources, in accordance with laws and regulations and Merck's own **Code of Conduct**. Grants awarded by Merck Research Laboratories (MRL) and the Office of the Chief Medical Officer are aligned with the overall scientific and medical strategies of Merck and are evaluated for scientific merit.

Merck is a member of and supports numerous professional associations, including but not limited to the American Association for the Advancement of Science (AAAS), the U.S. National Institutes of Health (NIH), the U.S. National Science Foundation (NSF), the World Medical Association (WMA), and the Institute of Medicine (IOM). In addition to promoting dialogue and exchange of ideas in research, Merck sponsors research conferences—such as selected Gordon Research Conferences, an international forum where researchers discuss advances in biologic, chemical and physical sciences—that cover areas in which Merck is conducting research.

Merck also collaborates with external researchers and other members of the pharmaceutical industry by participating in selected scientific consortia. Consortia are an important mechanism by which researchers can work together on nonproprietary scientific challenges common to all parties.

We believe in broader disclosure of financial relationships between physicians and the pharmaceutical industry. In 2008, Merck endorsed the Physicians Payment Sunshine Act, mandating disclosure of certain financial relationships. Even in the absence of a legislative requirement, in October 2009, we began voluntarily disclosing all payments to U.S.-based healthcare professionals who speak on behalf of Merck about our products and other healthcare issues. Click **here** for more information and a list of disclosures.

Public-Private Research Partnerships

Merck is a member of the Predictive Safety Testing Consortium (PSTC), a unique public-private partnership led by the nonprofit Critical Path Institute (C-Path). The PSTC brings together pharmaceutical companies to share and validate their safety testing methods under the advisement of the U.S. Food and Drug Administration (FDA) and the European Medicines Agency (EMA).

The 18 corporate members of the consortium share internal experience with preclinical and clinical safety biomarkers in kidney, liver, skeletal muscle, testicular toxicity, vascular injury and cardiac hypertrophy. All biomarker research programs have a strong translational focus to select new safety tools that are applicable across the drug-development spectrum. Advancing the science and use of biomarkers in drug development is a critical area of focus for Merck. The following are notable PSTC achievements:

- The FDA and EMA qualified seven new urine tests that signal kidney injury
- The PSTC opened a biomarker qualification process with the FDA for new biomarkers of drug-induced liver and skeletal muscle injury
- The Japanese Pharmaceuticals and Medical Devices Agency (PMDA) qualified new biomarker laboratory tests that signal kidney injury

The Biomarkers Consortium, in which Merck also participates, is a public-private biomedical research partnership managed by the **Foundation for the National Institutes of Health**. Its goal is to combine the forces of the public and private sectors

to accelerate development of biomarker-based technologies, medicines and therapies for the prevention, early detection, diagnosis and treatment of disease. Working together, the members of the Biomarkers Consortium are building uniquely powerful collaborations that are accelerating the development of biomarker-based technologies, medicines and therapies.

To date, the consortium has launched eleven projects in areas such as Alzheimer's disease, metabolic disorders, immunity and inflammation, cardiovascular disease, cancer imaging and, most recently, drug-induced kidney injury. The consortium completed its first project, Adiponectin, in 2009, which established that cross-company collaboration is a feasible and powerful approach to biomarker qualification.

Merck has continued its participation in the National Institutes of Health Alzheimer's Disease Neuroimaging Initiative (ADNI), the largest public-private partnership in Alzheimer's disease research. This study, which is designed to gain new insights into the onset and progression of Alzheimer's disease, has now expanded to ADNI2, with the goal of improving clinical trial design and aiding drug development. ADNI2 will seek to identify and track early changes in the brain before the onset of Alzheimer's symptoms by using imaging techniques and biomarker measures in blood and cerebrospinal fluid.

Within Europe, Merck participates in the Innovative Medicines Initiative (IMI) project RAPP-ID (Development of Rapid Point-of-Care Platforms for Infectious Diseases). This consortium of 19 partners from across the pharmaceutical, diagnostics and academic world aims to address the need to diagnose and treat suspected infections rapidly, and will work to develop new diagnostics. The development of rapid, point-of-care diagnostic tests for specific infections would not only facilitate enrollment in clinical trials but also lead to more appropriate use of agents in clinical practice.

Merck along with Eli Lilly and Pfizer formed the Asian Cancer Research Group (ACRG), an independent, not-for-profit company established to accelerate research and ultimately improve treatment for patients affected with the most commonly diagnosed cancers in Asia—gastric and lung cancers. ACRG aims to improve the knowledge of these cancers and to accelerate drug discovery efforts. Specifically, ACRG will create an extensive pharmacogenomic database composed of data from approximately 2,000 tissue samples from patients with lung and gastric cancer that will be made publicly available to researchers and, over time, further populated with clinical data from a longitudinal analysis of patients. Comparison of the contrasting genomic signatures of these cancers could inform new approaches to treatment.

CLINICAL RESEARCH

Clinical testing begins with Phase I studies, which are designed to assess the safety, tolerability, pharmacokinetics and preliminary pharmacodynamic activity of the compound in humans.

Pharmacokinetics refers to what the body does to the drug, while the term "pharmacodynamics" refers to what the drug does to the body.[1] If these initial tests are favorable, additional, larger Phase II studies are initiated to determine the effectiveness of the compound in the affected population and to define appropriate dosing for the compound, as well as identify any adverse effects that could limit the compound's usefulness.

If data from the Phase II trials are satisfactory, companies will invest in large-scale Phase IPhase III trials to confirm the compound's safety and effectiveness. Upon completion of those trials, if satisfactory, companies submit regulatory filings for marketing approval with the appropriate regulatory agencies around the world to have the product candidate approved for marketing.

Merck conducts clinical trials worldwide to evaluate the safety and efficacy of our products. These trials are fundamental to the development of innovative medicines and vaccines that treat and prevent illness in humans. It is Merck's **policy** that all investigational studies in human subjects must be conducted in a manner consistent with laws, regulations and guidelines for the protection of human subjects, including International Conference on Harmonization-Good Clinical Practices (ICH-GCP) standards. However, individual country regulations and guidelines should remain the primary source of specific requirements for the conduct of medical research.

Consistent with a trend in the pharmaceutical industry, significantly more than half of the patients participating in our clinical trials are enrolled outside the United States, in more than 70 countries. As a result, we obtain information in diverse populations, which ensures a thorough evaluation of the safety and efficacy of our medicines and vaccines. Because of this effort, we can seek regulatory approvals throughout the world and thereby offer our medicines globally to patients who need them.

PHASE II–V CLINICAL TRIALS (PERCENTAGE OF PATIENTS)

Region	2009	2010	2011
Asia Pacific	30%	10%	8%
Central & Eastern Europe, Middle East and Africa	4%	9%	5%
European Economic Area	35%	30%	19%
The Americas	17%	3%	16%
United States	15%	49%	51%

Clinical Trial Design

We consider many factors when we design a clinical trial:

- **Our questions and objectives:** Clinical study designs vary based on the specific objectives of the study. For example, the design of a study to assess the efficacy of a medicine in treating a particular condition is different from one seeking to determine the optimal dose of a medicine in a particular group of people.
- **Statistical appropriateness and feasibility of conducting the study:** To make sure trial results are statistically meaningful, it is necessary before a trial begins to determine the number of patients needed to participate. It is also necessary to assess the ability to successfully conduct the trials.
- **Acceptability of the trial design by regulatory agencies:** When necessary, Merck Research Laboratories consults with regulatory agencies on design issues.
- **Ethical perspectives**

All Merck studies, regardless of the study design, use a standard format:

- The study objectives and endpoints (i.e., measurements) must be clearly stated before the study begins
- The hypothesis or scientific question being asked by the study must be clearly defined
- A plan for the analysis of the data must be developed before the trial begins and is finalized before the trial is completed

The benefits of this format include strengthening the scientific credibility and the regulatory acceptability of the results and ensuring timely data analysis and publication of results.

Clinical Trial Design, Conduct, Oversight and Monitoring

Our clinical trials are designed, conducted and monitored in adherence to the same Merck global standards, whether the trials take place in the United States or elsewhere around the world. In addition to following Merck global standards, our clinical trials conduct adheres to the ICH-GCP standards and to the principles that have their origin in the Declaration of Helsinki. **Learn more** about our new policy on clinical trial ethics.

Our clinical trials are designed with input from local clinical investigators and external consultants with specific, relevant experience. For early clinical trials in Phase II, studies are monitored on an ongoing basis by the clinical monitor and study team and, when appropriate, a standing, internal data-monitoring committee of Merck Research Laboratories (MRL) senior managers reviews unblinded data from ongoing trials in a prespecified, scientifically acceptable manner. The goals of the committee are to protect the safety of trial participants and assess if the risk-benefit profile is favorable. The committee's recommendations are communicated internally to relevant scientists and can be distributed externally to clinical investigators, review boards or regulatory agencies, as appropriate.

For all Phase III and other clinical trials intended to support registration, studies are monitored by the clinical monitor and study team. In addition, if unblinded data will need to be monitored to ensure patient safety or to make decisions about continuing a study, a data-monitoring committee (DMC) composed of external experts independent of Merck is assembled to provide review and make recommendations to Merck about the further conduct of the study. In addition, it is Merck's policy to establish scientific advisory committees composed of external scientific leaders and Merck scientists. With these committees, Merck can obtain expert advice on the design of the trial, provide for transparent review and discussion of the data, and foster a collaborative approach to the publication and presentation of findings. Merck also established a companywide, global approach for assessing clinical safety by implementing internal organ-specific safety boards to support the evaluation and management of organ-specific safety issues.

All protocols and related documents are reviewed and approved by external and independent Institutional Review Boards (IRBs) or Ethical Review Committees (ERCs).

Merck requires assurance that patients involved in trials and/or their legal representatives understand the procedures, use and disclosure of personal health information, use of biological

samples, and risks/benefits involved in a clinical study, and that a patient's participation is voluntary. In circumstances where patients receive payment or reimbursement for trial participation, this compensation is appropriate for the cost and inconvenience incurred and clearly outlined in the consent form for full transparency.

Informed consent is obtained prior to initiation of any clinical study procedures, including those performed solely to determine eligibility for participation in the trial. A consent form, approved by both Merck and the IRB/ERC and translated into a language familiar to the study subject, must be carefully reviewed and approved by all participants to ensure that their participation in the study is voluntary and informed. The consent procedures conform to all legal statutes and government regulations concerning research in human subjects and the privacy and security of the medical information. In the case that a prospective study participant cannot read the form, a patient advocate may read the consent form, with consent documented and witnessed.

Compassionate Use Program

Merck has a procedure for early access to non-registered products for named patient programs and country-specific authorizations. This procedure recognizes the importance of providing access to new treatments under development to certain patients. Merck may also decide to conduct an expanded access program for a limited number of qualified patients according to a clinical protocol. Merck may conduct these compassionate use programs under the following circumstances: the disease is life-threatening or severely debilitating; no effective alternative treatments are available for patients, or a patient has failed to respond to available treatments; a patient is not eligible for a clinical trial; and a marketing authorization application is planned in the future.

Protecting Personal Health Information

Merck is a member of the **International Pharmaceutical Privacy Consortium (IPPC)**, an association of research-based pharmaceutical companies formed in 2002 that has worldwide responsibility for the protection of personal health information and other types of personal data. Merck has been actively involved in the IPPC since 2006 to engage in a constructive dialogue with European data-protection authorities and other regulators on privacy standards for biomedical research.

In accordance with ICH-GCP guidelines, trial sponsors should appoint clinical trial monitors who are appropriately trained to monitor the trial adequately. Accordingly, ICH-GCP training is a mandatory course for all Merck clinical research associates (CRAs) who monitor clinical trials, as well as for all contract research organization (CROs) who monitor clinical trials on behalf of Merck.

Merck's CRAs (or those monitoring on behalf of Merck) will visit sites throughout the study to ensure:

- The principal investigator and site staff are qualified and have adequate facilities and equipment to conduct clinical research throughout the duration of the study
- Site staff are adequately trained on the protocol, procedures and equipment
- Site staff adhere to protocol requirements, sponsor's development procedures (DPs) and ICH guidelines
- Clinical supplies are stored and dispensed as per protocol
- Regulatory file documents are accurate and maintained as per ICH guidelines and sponsor DPs
- Source documentation, including drug accountability logs, are maintained as per ALCOA (attributable, legible, contemporaneous, original and accurate) guidelines
- Subject safety, through review of source documentation, including drug accountability logs
- Data reported to the sponsor is accurate and reported as per sponsor requirements

Contract Research Organizations

Approximately 25 percent of our trials today (increasing to 50 percent in the future) are outsourced to contract research organizations (CROs) for the execution of the study. Before agreeing to work with each CRO, Merck performs rigorous assessments and due diligence audits to ensure that the CRO complies with Good Clinical Practice (GCP) standards and is aligned with Merck's own Code of Conduct. Merck clinical trial teams structure and rigorously oversee the studies being run by CROs, and perform periodic audits of all existing CROs with which we do business. If and when we identify violations of the contract or GCP standards, Merck works with the CRO on a corrective action plan. If improvements are not made within a defined period of time, or if repeat violations are noted and unsatisfactorily remediated, Merck will terminate work with the CRO.

Post-Marketing Activities

Merck continues to research regularly the effectiveness and safety profiles of our products. We conduct several types of studies after approval:

- **Post-approval studies on new indications:** Some drugs may be effective for more than one indication. For example, an oncology product can be developed to treat several types of cancer. In such cases, a clinical trial must be conducted to determine the safety and efficacy of the drug in each new patient population.
- **Commitments to regulatory authorities:** For some products, regulatory authorities require companies to conduct additional interventional or non-interventional studies after the product is approved. The study could be required for multiple reasons, such as obtaining further information on the safety of the product. Merck works closely with regulatory authorities to design a study that will fulfill the specific requirement.
- **Epidemiology studies:** Merck has a long history of working closely with external experts in pharmacoepidemiology to understand the types of patients utilizing our products, as well as to examine the effectiveness and safety profiles of many of our marketed products as they are used in clinical practice in several population-based healthcare systems.
- **Pregnancy registries:** For some products, Merck has active data collections in systems, which can facilitate the early detection of teratogenicity and other serious adverse experiences in patients who inadvertently or purposefully use a drug during pregnancy. Useful information about the outcome of exposure in pregnancy can best be obtained by the careful collection and analysis of post-marketing surveillance data. Reports of the aggregate data in each registry are updated annually and shared with regulatory authorities.

Post-Marketing Safety Studies

Merck monitors the use and safety of its products. We also works closely with external experts in pharmacoepidemiology and drug utilization to examine the utilization and safety of our marketed products as they are used in several population-based healthcare systems. These include, but are not limited to Kaiser-Permanente (KP) Southern California, KP-Northern California, Innovus, Pennsylvania and New Jersey Medicare, Harvard Pilgrim Health Care, and Mayo Clinic Olmsted County, Minnesota. We have a long history of conducting post-marketing safety studies to examine our products as they are used in clinical practice. **Learn more** about our post-marketing activities.

Regulatory Agency Training

In 2011, MRL Compliance supported three Good Clinical Practice (GCP) educational training requests. These efforts aim to help enhance local regulatory agencies' knowledge and capabilities in their GCP-compliance oversight role. The venues supported in 2011 were as follows:

- MRL Compliance, representing PhRMA Japan, was invited to participate in the PMDA (Pharmaceuticals and Medical Devices Agency) GCP inspection sub-working group (four meetings in 2011)
- May 2011: MRL Compliance was invited to present at the DIA conference on the topic of "GCP Inspections & Audits in Asia & Japan." Conference attendees included Japanese & Asian regulators.
- November 2011: MRL Compliance was invited to present at an industry conference on the topic of "FDA inspections." Conference attendees included Japanese regulators.

[1] Leslie Z. Benet, Pharmacokinetics: Basic Principles and Its Use as a Tool in Drug Metabolism, p.199 in: *Drug Metabolism and Drug Toxicity*, JR Mitchell and MG Horning (eds.), Raven Press, New York (1984).

PERFORMANCE & COMMITMENTS

Number of New Product and Device Registrations	2009	2010	2011
Asia Pacific	85	77	41
Central & Eastern Europe, Middle East & Africa	155	129	101
European Economic Area	82	95	95
The Americas	95	90	93
United States	2	2	4

Note: New Products, including new indications, are captured in the table above.

SAFETY STUDIES CONDUCTED IN PARTNERSHIP WITH EXTERNAL INSTITUTIONS

Product	Study Type	Population	Status
GARDASIL® [human papillomavirus quadrivalent (types 6, 11, 16, 18) vaccine, recombinant]	Safety	189,629 female adolescents and women in U.S.	Completed December 2010
GARDASIL	Safety in pregnancy (congenital anomaly)/long-term effectiveness	Nordic countries	Ongoing
GARDASIL	Safety	Up to 135,000 males in U.S.	Ongoing
ROTATEQ® (rotavirus vaccine, live, oral, pentavalent)	Safety and effectiveness	85,150 infants vaccinated with ROTATEQ in U.S.	Completed 2010
VARIVAX® [varicella virus vaccine live (Oka/Merck)]	Effectiveness over 15 years	~43,000 children and adolescents followed over 15 years in US	Completed 2010
VARIVAX	Safety and effectiveness over 15 years	~7,600 children in U.S.	Completed 2010
SINGULAIR® (montelukast sodium)	Safety in pregnancy	53,651 pregnancies, 1,504 with exposure to SINGULAIR in U.S.	Completed 2009
ISENTRESS® (raltegravir)	Safety in HIV population	U.S. cohort	Ongoing
ISENTRESS	Safety	EU cohort	Ongoing
PROQUAD® (measles, mumps, rubella and varicella [Oka/Merck] virus vaccine live)	Safety	~69,000 children aged 12 months to 12 years in U.S.	Completed 2008
ZOSTAVAX® (zoster vaccine live)	Safety in elderly population	~29,000 people 60 years of age or older in U.S.	Completed 2010
ZOSTAVAX	Effectiveness	At least 30,000 subjects 50 years or older in US	Ongoing
PROSCAR® / PROPECIA®	Safety	Registry-based study in 4 Nordic countries	Ongoing
NEXPLANON® (contraceptive device)	Safety	7,100 women with insertion and/or removal of NEXPLANON in U.S.	Ongoing
NUVARING® (contraceptive device)	Safety	Approximately 35,000 women worldwide	Ongoing
SAPHRIS® (asenapine)	Safety	Four safety/utilization studies in U.K.	Ongoing
VICTRELIS® (boceprevir)	Safety	Drug utilization of boceprevir and clinical management of health outcomes of interest in 1,000 chronic hepatitis C patients in Europe	Ongoing
HIV products	Safety	HAART consortium for safety studies (HIV antivirals)	Ongoing
FOSAMAX® (alendronate)	Safety	General practice research database in U.K.	Completed 2012
VYTORIN® (ezetimibe/simvastatin)	Safety	Follow-up of SEAS patients using Nordic and U.K. registries	Ongoing

SUMMARY OF TRIAL DISCLOSURE ACTIVITIES	2009	2010	2011
Manuscripts of clinical trial results and related papers submitted to peer-reviewed journals	176	277	245
Number of GCP/PV inspections conducted by regulatory agencies worldwide	87	87	104

Note: Of the GCP/PV inspection conducted by regulatory agencies worldwide during 2009–2011, none resulted in critical observations that led to significant fines, penalties, warning letters or product seizures.

CLINICAL TRIALS

Merck is committed to the timely registration of clinical trial information and the disclosure of trial results—regardless of their outcome.

In response to physician and patient requests for improved information, Merck registers clinical trials at **ClinicalTrials.gov** and has been posting results of clinical trials at the site since October 2008. Prior to October 2008, Merck posted results of clinical trials to **ClinicalStudyResults.org**. Effective December 2011, the study results maintained in the ClinicalStudyResults.org database were transferred to **Merck.com** because of PhRMA's announcement that the database will be removed by the end of 2011. Registration and the posting of results provides patients and physicians with information about clinical trials that are open and recruiting patients, and it enables researchers who analyze, report or publish the results of clinical trials to have timely information about our medicines and vaccines.

Clinical Trial Registration

Merck has long been committed to publishing the results of our clinical trials, regardless of outcome, in a timely manner. We believe that clinical trial registries serve an important function for patients and their healthcare providers to learn about and gain access to relevant clinical trials of experimental treatments or preventative agents. We continually assess changing global requirements and update our clinical processes and practices to make sure the company is compliant.

For those who analyze, report or publish the results of clinical trials, a clinical trial registry also provides information on trials in progress and the ability to track such trials over the course of development. Beginning in 2005, Merck registered clinical trials that began or were completed in 2002 or later, and posted results for marketed products. Since February 2007, Merck's policy has been to register at initiation clinical trials (Phases I–V in patients of investigational and marketed products in which treatment is assigned) that it sponsors and conducts worldwide on ClinicalTrials.gov.

In keeping with our publication guidelines, Merck discloses balanced and accurate information regarding our registered clinical trials of marketed products, regardless of outcome. In addition, we disclose clinical trial results of marketed products on websites designed for this purpose in the United States. Through December 2008, we posted study results on ClinicalStudyResults.org. However, it is now our practice to post results at ClinicalTrials.gov. A synopsis will be posted 30 days after the product is marketed in the United States or within 12 months after the last patient's last visit for the primary outcome occurs, whichever is later.

Disclosure of Clinical Trial Results

For many years, Merck has been committed to publishing results of hypothesis-testing trials, predating recent questions about the publication of such data. We expanded our commitment in 2007 by disclosing results from registered trials of marketed products, as noted above in the introduction of this section. Merck's **Guidelines for Publication of Clinical Trials and Related Works** are posted online. These guidelines contain additional information about how Merck works with external authors and contributing writers. We also adhere to the **International Committee of Medical Journal Editors (ICMJE)** guidelines for authorship, requiring that authors:

- Make substantial contributions to study conception and design, or acquisition of data, or analysis and interpretation of data
- Draft the article or revise it critically for important intellectual content
- Give final approval of the version to be published

We also adhere to the authorship criteria of other, respected biomedical journals if their criteria differ from those of the ICMJE. In addition, individuals who do not meet criteria for authorship but who provide support are recognized in acknowledgments when the manuscript is published. Merck staff or contract writers that we hire may facilitate the

development of a manuscript when the lead author provides oversight and direction; the efforts of the writers will then be acknowledged in the publication.

We also adhere to ICMJE or journal-specific guidelines for disclosure of potential conflicts of interest for the full author team. Reported potential conflicts of interest include both financial and nonfinancial ones.

In July 2011, Merck introduced its latest transparency policy around its clinical trials. Called the Protocol Transparency Initiative, this voluntary practice involves providing the clinical study protocol to biomedical journals when submitting a manuscript on a clinical trial, allowing journal editors and peer reviewers to use this protocol in their evaluation of the manuscript for publication. Furthermore, if the journal accepts the manuscript, Merck allows the journal—at its sole discretion—to post key sections of the protocol on its website when the manuscript is published.

Merck complies with all applicable laws and regulations associated with registration of clinical trials and posting results. If a clinical trial of a marketed product is terminated early for safety reasons, we will promptly disclose medically important information to regulatory authorities and the public, update the status on ClinicalTrials.gov within 30 days, and submit a manuscript to a journal (or post a summary online) within 12 months after the last patient's last visit occurs. If terminated for efficacy reasons, the results will be disclosed within 12 months after the last patient's visit occurs. Summaries of terminated trials will provide information about patient disposition, safety and adverse experiences, as well as an explanation for why the trial was terminated early. For our position on clinical trial registries, click **here**.

Access to Merck Clinical Trial Databases

In addition to disclosing results of clinical trials, we respond to requests from external researchers to share Merck clinical trial data. We have multiple clinical trial databases that are of high value to the external clinical research community. We evaluate each request based on criteria that balance the need to advance science with the need to protect intellectual property and confidential information, and in compliance with applicable privacy and data-protection laws, rules and regulations.

CLINICAL RESEARCH PERFORMANCE DATA SUMMARY	2009	2010
Number of GCP/PV inspections conducted by regulatory agencies worldwide*	87	87

*Of the GCP/PV inspections conducted by regulatory agencies worldwide during 2009–2010, none resulted in critical observations which led to significant fines, penalties, warning letters, or product seizures

ANIMAL RESEARCH

To discover, develop, manufacture and market innovative medicines and vaccines that treat and prevent illness, laboratory animal research is indispensable for scientific and regulatory reasons.

Merck is dedicated to the ethical and responsible treatment of all animals used in the development of medicines and vaccines. Merck does not perform animal testing on cosmetic products. Decisions regarding animal care, use and welfare are made by balancing scientific knowledge and regulatory requirements with consideration of ethical and societal values.

The care and use of laboratory animals in biomedical research is highly regulated. In general, the regulations govern housing, feeding, veterinary care and research-project review, and include both internal and external inspections. Our standards for animal care and use meet or exceed all applicable local, national and international laws and regulations.

As further evidence of our commitment to the highest level of animal care, Merck Research Laboratories' (MRL's) research sites voluntarily seek and secure a third-party review and accreditation of our animal research programs and facilities by an independent organization—the **Association for Assessment and Accreditation of Laboratory Animal Care-International (AAALACi)**. Merck also advocates for the development of best practices and dissemination of information by supporting and participating with nongovernmental organizations such as the Scientist Center for Animal Welfare, the Institute for Laboratory Animal Research at the National Academy of Sciences, and the American College of Laboratory Animal Medicine Foundation.

Merck's standing Institutional Animal Care and Use Committees (IACUCs)/Ethical Review Committees, which include veterinarians and independent, non-Merck members, provide oversight of the company's animal care and use programs. They review all proposed animal studies, review the animal care and use programs, inspect facilities, investigate any concerns and report all findings to the Institutional Official for Animal Welfare, who is globally accountable for compliance with all of our animal welfare policies and regulations.

To assist in this responsibility, an Animal Welfare Compliance group provides support and monitoring. Appropriately qualified veterinarians oversee the healthcare of all the animals. All employees who are involved with research animals are given animal-welfare training, which includes review of regulations and policies, instruction on how to search for animal research alternatives, explanation of the role of the IACUC/Ethical Review Committees and training on how to raise concerns. Merck places high value on its animal-welfare-stewardship responsibility; violating these policies would be grounds for employee disciplinary action, up to and including dismissal.

Merck holds similar expectations for standards of animal care and use at our contract laboratories. Merck performs due diligence and monitors external laboratories performing in vivo studies on our behalf, and holds them accountable to the same regulations and standards that govern our animal care and use. Additionally, in vivo research conducted at third-party laboratories is subject to protocol review by a Merck IACUC or equivalent committee. Noncompliance with regulations or standards can lead to termination of the relationship.

Replacement, Reduction and Refinement

Merck is committed to the philosophy of using the best scientific methodologies and animal alternatives whenever possible or permissible by law. To promote this commitment, we subscribe to the "3Rs"—Replacement, Reduction and Refinement for laboratory animal-based research.

- Replacement—using nonanimal systems or less-sentient species (for example cell cultures, computer modeling, bacterial assays and fish models)
- Reduction—using the minimum number of research animals necessary to obtain valid scientific data (sophisticated animal models that yield precise data, such as telemetric monitoring models that monitor ECG and blood pressure, reduce the number of animals needed)
- Refinement—minimizing any distress or discomfort during a study (extensive literature searches contribute to the use of the best scientific models, and analgesics or tranquilizers are used whenever possible)

In 2012, Merck created a 3Rs Committee that will collect, promote and disseminate information on the 3Rs practice. Training in the 3Rs is part of staff orientation for in vivo research. It is our responsibility to use the most appropriate methodology and to aggressively seek scientifically valid 3Rs approaches to animal research. Merck also has extensive in vitro expertise and investments, including an In Vitro department that develops and utilizes nonanimal research methods (cell cultures) in the discovery and development of new medicines and therapies. Merck also provides funding to support 3Rs research at external organizations such as the Johns Hopkins Center for Alternatives to Animal Testing (CAAT) and the European Partnership for Alternative Approaches to Animal Testing (EPAA).

As an example of refinement and reduction in the number of animals used, Merck has created a world-class imaging department that allows scientists to view cancers and other pathologic diseases in animals and monitor the long-term effectiveness of new treatments in a noninvasive manner. In addition, the company employs internal and external information specialists in our research library, trained by the Animal Welfare Information Center of the U.S. National Agricultural Library, to assist our scientists in identifying potential animal alternatives.

INTERNAL MERCK ANIMAL ALTERNATIVE AWARD

To support the 3Rs philosophy, since 1994, Merck has presented an Animal Alternative Award annually to the team or teams of Merck scientists who develop new techniques that support the alternative principle, and has published their work to share with the scientific community. The 2011 Animal Alternatives Award went to process refinement in bladder catherization. The 2010 award was for validation of an electrocardiogram (ECG) parameters model in a guinea pig model that replaced a canine model.

ANIMAL ALTERNATIVE AWARD FOR VETERINARY RESEARCH

The Dieter Lütticken Award, sponsored by **Merck Animal Health**, is used to promote scientists or life science research institutions working in areas that serve the 3Rs concept, i.e., replacing, reducing or refining the use of animals in testing, in the development and production of veterinary medicines. The total funding for this award is 20,000 euros.

The 2011 Award went to a scientist whose trendsetting work on the development, optimization and standardization of polymerase chain reaction (PCR) assays of extraneous agent testing of inactivated poultry vaccines replaced the need for testing on live chicks.

The 2010 Award went to a team in the United Kingdom that established a physiologically relevant, rapid and sensitive in vitro air interface respiratory tract organ culture model to analyze host-pathogen interactions following single and mixed infections with the respiratory pathogens ***Mannheimia haemolytica*** and bovine herpesvirus 1 (BHV-1).[1] This model has replaced the use of animals in some studies of respiratory disease and has the potential to be used in developing new vaccines.

[1] Reference: Niesalla HS, Dale A, Slater JD, Scholes SFE, Archer J, Maskell DJ, Tucker AW. Critical assessment of an in vitro bovine respiratory organ culture system: a model of bovine herpesvirus-1 infection. *Journal of Virological Methods* 2009;158:123-129.

REGENERATIVE MEDICINE

Some of the most advanced scientific technologies in regenerative medicine involve animal or human embryonic stem cells.

Merck believes that such research has the potential to help identify important new medicines and therapies for important unmet needs, and we have been conducting research into the biology of stem cells for more than a decade. This research has involved the use of animal or human adult stem cells.

We have a Regenerative Medicine Oversight Committee comprising both internal and external experts. This committee helps oversee our research involving stem cells, including highly targeted research using human embryonic stem cells and stem cells developed through somatic cell nuclear transfer or induced pluripotent stem cells (iPSC).

Merck, along with the scientific community, believes that research using stem cells has the potential to help identify medicines and therapies that will treat or cure diseases and alleviate the suffering of patients. Examples would include Parkinson's disease, cancer, cardiovascular disease, diabetes, osteoarthritis and trauma.

The company conducts research using stem cells in full accordance with all applicable laws and regulations and our own research policies. Merck research involving stem cells is guided by National Academy of Sciences guidelines.

GENETIC RESEARCH

Genetic research examines how variations in DNA affect the system of human biomolecules—such as RNA and proteins—thereby affecting disease and an individual patient's response to drugs.

The advent of DNA-sequencing methodology used to sequence the human genome—combined with advances in microarray technology, powerful computing hardware and software, and high-throughput analysis of biomolecules—has made it practical to initiate studies that may help us understand which genetic determinants cause or contribute to a disease or drug response.

Merck scientists have a strong commitment to understanding how genes work and how they are linked to diseases and drug treatments. For example, our scientists identified two genes in mice that could someday be targets for obesity-prevention drugs.[1] Finding genetic signatures that can be influenced with drugs is very complex because, in addition to environmental and behavioral factors, many genes may contribute to each individual's obesity.

We collect genetic samples in Merck clinical trials and analyze data from such trials so we can apply new technologies to improve the development of new medicines and vaccines. The collection of samples represents the critical foundation of all clinical genetic research strategies. We obtain appropriate subject consent for use of the genetic samples in accordance with the ethical principles that have their origin in the Declaration of Helsinki, U.S. FDA requirements (21 CFR 50.20, 50.25 and 50.27), the International Conference on Harmonization (ICH) E6 Good Clinical Practices guidelines, and the 1997 UNESCO Declaration on the Human Genome and Human Rights.

[1] Xia Yang. Validation of candidate causal genes for obesity that affect shared metabolic pathways and networks. *Nature Genetics* 2009 (41); 415-423,

PATIENT SAFETY

We recognize that when people take our medicines and vaccines, they must have confidence in their efficacy and safety. Ensuring this confidence is crucial to us.

Medicines and vaccines are widely tested before they are approved for marketing. This testing is governed by a comprehensive regulatory scheme and our research policies. We assess the safety of our products in clinical trials over many years before our products are approved. Merck is committed to the timely registration of clinical trial information and disclosure of trial results—regardless of their outcome. **Learn more** about our clinical trials.

REPORTING AN ADVERSE EXPERIENCE IN THE U.S.

To speak with a Merck healthcare professional about Merck products, or to report an adverse experience with a specific Merck product, please call the Merck National Service Center at 800-444-2080. The center can assist you Monday through Friday, from 8 am to 7 pm eastern time. Adverse experiences and product-related emergencies can be reported at any time by dialing 800-444-2080.

Merck Global Safety manages a global system for the collection, management and reporting of adverse experience (AE) reports received by Merck worldwide. **Learn more**.

Monitoring & Compliance

The Global Clinical and Pharmacovigilance Compliance (GC&PVC) function at Merck is part of the MRL Compliance organization, which resides in the Global Compliance Organization (GCO). This group is responsible for conducting independent, periodic audits of the processes, computerized systems, technology and collaborative partners supporting Merck Human Health, Merck Animal Health and Consumer Care divisions within Merck. MRL has a comprehensive, risk-based audit and compliance oversight program that encompasses a broad range of GCP and PV audits and assessments of the following:

- **Clinical investigator sites:** Audits to assess compliance with the protocol and with Good Clinical Practice and Good Pharmacovigilance Practice regulations and guidelines
- **Collaborative partners:** Pre-contractual assessments and selected post-contractual audits of contracted research organizations (CROs), central laboratories and other third-party business partners and vendors
- **Computerized systems and technology:** Audits and assessments of the computerized systems and technology supporting clinical development
- **Internal process/systems audits:** Systematic evaluations of compliance of clinical and animal health development processes with Standard Operating Procedures, Global Development Procedures, ICH-GCP and other applicable regulations and guidances
- **Country operations audits:** Periodic and systematic assessments of Merck's clinical trial and Animal Health operations and activities carried out by our subsidiaries worldwide
- **Business partner audits:** Audits of companies external to Merck where a licensing or development agreement exists, in which compliance with contractual and regulatory requirements is assessed
- **Verification audits:** Audits to verify that the corrective actions that have been implemented are effective at remediating the noncompliance

Through the oversight and implementation of this comprehensive audit program, GC&PVC provides independent and continuous assurance to Merck senior management that the operations, processes and computerized systems and technology supporting Merck Human Health, Animal Health and Consumer Care development activities comply with applicable global regulations and guidelines as well as internal company policies and procedures.

Risk Management

Merck Global Safety leads the development of Risk Management & Safety teams for all products, from the beginning of Phase IIb throughout the product life cycle. Global Safety is responsible for the formation of a proactive clinical safety risk-management strategy, including the Risk Management Plan, which is a regulatory requirement in many countries for marketed drugs and vaccines.

Development of the overall risk management strategy incorporates all available internal (e.g., basic research data, animal and human studies with the product and/or related products) and external information (e.g., literature and public data related to class of drugs and/or therapeutic target) that contributes to the overall risk-benefit assessment of the product. The strategy focuses on activities needed to identify, evaluate and manage potential patient-safety risks. The Risk Management & Safety teams assess patient safety using product labeling, physician and patient educational programs, and other risk-minimization strategies, as appropriate. The Risk Management & Safety teams also implement strategies to determine the effectiveness of these interventions, as appropriate.

SAFETYMATTERS INITIATIVE

In late 2007, Merck senior leadership launched the SafetyMatters initiative to investigate potential enhancements to our already robust approach to identifying and evaluating health outcomes of interest (HOIs) in connection with our marketed products. The goal of SafetyMatters is to explore and implement appropriate use of emerging technologies and methods for HOI identification and evaluation, and thereby further improve post-licensure monitoring and evaluation of our marketed products. A cornerstone of SafetyMatters is the proactive development and utilization, as needed, of Disease Cohorts based on data contained in large medical claims and electronic-health-record databases licensed by Merck. As of March 15, 2012, the Merck Pharmacoepidemiology and Database Research Unit has successfully created and utilized 20 SafetyMatters Disease Cohorts in twelve product-specific areas.

Product Label Reviews

Ongoing oversight and monitoring of our product labels is a major focus of our safety efforts. Our label review teams monitor information on our products and work with our product safety teams to develop or update product labeling. We communicate relevant information regularly to regulatory agencies worldwide.

OBSERVATIONAL MEDICAL OUTCOMES PILOT (OMOP)

The **Observational Medical Outcomes Pilot (OMOP)** initiative is a partnership between PhRMA and the FDA to comprehensively assess the validity of observational analyses methods to evaluate the safety of marketed drugs in large patient-level claims and electronic-health-record-databases. In March 2009, Merck, in collaboration with United BioSource Corporation (UBC), was recognized by OMOP as a leader in the development of coding algorithms for HOIs used in observational research, and was selected to pursue this work on behalf of the entire OMOP research community. The UBC-Merck partnership continues its efforts to help construct the OMOP clinical coding library. OMOP is complementary to our internal SafetyMatters initiative. Merck continues to support OMOP's activities in 2012 and conduct internal tests of distributed database systems and methods. We are continuing to explore synergies and linkages between OMOP and SafetyMatters to establish standards for the use of modern epidemiology data sources and analytic techniques to evaluate product safety in observational claims and electronic-health-record databases.

Communicating About Product Risks

Our information leaflets in our product packaging contain information on possible side effects and, if appropriate, how to avoid some potential problems. We include **contact details on our corporate website** for patients, caregivers and health professionals to report adverse experiences in the United States. Outside the United States, adverse events are reported according to local laws and practices.

Depending on label changes and their context, we may determine, in consultation with regulatory agencies, that more extensive communications may be appropriate. In such cases, we work with regulatory authorities to contact healthcare professionals in a timely manner, so that they can communicate these findings to patients through appropriate mechanisms. Contacting healthcare professionals might include "Dear Doctor" letters and media releases.

ADVERSE EVENT REPORTING

Merck Global Safety manages a global system for the collection, management and reporting of adverse experience (AE) reports received by Merck worldwide.

Regulations vary by country; however, most countries require drug manufacturers to promptly review AE information they receive from any source, domestic or foreign, relating to their products. Manufacturers are also required to adopt written procedures for managing and reporting post-marketing adverse experiences. Merck is implementing a state-of-the-art, computer-based system as a repository of information received regarding AEs with Merck products.

In accordance with national regulatory requirements, Merck has developed a written procedure to provide personnel worldwide—including all contractors—with a consistent and thorough process for identifying, reporting and processing AEs occurring while patients are using our products (but not necessarily due to their use). These procedures cover the reporting of AEs originating in clinical studies and those associated with the use of marketed products. Adherence to these procedures ensures the timely and accurate monitoring of the safety profile of Merck's investigational and marketed products globally.

To report an adverse experience to regulatory authorities, we need at least minimal information: the name of the Merck medicine involved, an adverse experience, an identifiable patient and an identifiable reporter. In addition to submission of individual AE reports to regulatory authorities, either within 15 days or periodically, we also file aggregate reports (quarterly, twice a year, annually) for as long as we market a medicine or vaccine.

Our Risk Management & Safety teams review all pharmacovigilance data and determine what actions may need to be taken with reference to the evolving safety profile of our products. These teams include physicians and epidemiologists who are trained to review this type of data.

It can be difficult to determine the exact cause of an adverse experience because many patients have more than one condition and may be taking multiple medicines. Our pharmacovigilance staff takes great care to make sure that AE reporting is as accurate as possible. We consolidate the data to determine if there are any patterns or signs of problems that need additional surveillance.

Another major safety focus is the ongoing oversight and monitoring of our product labels. Our label review teams monitor information on our products and work with our product safety teams to develop or update product labeling. Information is then communicated to regulatory agencies worldwide.

Employees responsible for monitoring and reporting adverse experiences undergo rigorous training every other year. New MRL employees—including all contract personnel—working in areas related to clinical research undergo training on Merck's AE policies and procedures when they join the company. All other MRL employees are encouraged to complete the training as well.

CHIEF MEDICAL OFFICER

The Office of the Chief Medical Officer (CMO) collaborates with colleagues throughout the company to ensure that we remain firm in our commitment to patient safety and well-being, and that we demonstrate this commitment in all of our decisions and actions.

Dr. Michael Rosenblatt, executive vice president and chief medical officer, leads this effort, representing an independent voice of patients and medicine within Merck and serving as the primary voice of Merck to the global scientific and medical community. He advises senior leadership and the Merck Board of Directors on key medical matters and also serves as the company's medical spokesperson, communicating with global health stakeholders, including the media and policy makers, about our products, our policy positions and other matters affecting patients.

Our CMO and his team collaborate with external scientists, academics and governments, sharing ideas and exchanging fresh insights so that Merck can better address global health challenges. Inside Merck, they provide medical and scientific perspective to inform R&D and commercial and corporate strategies, including our social responsibilities. The team also plays a direct role in fostering scientific transparency; establishing publication guidelines; providing medical reference information and education for physicians, other health professionals and consumers, and enhancing employee wellness.

In short, the CMO and his team play a unique role in helping Merck and our employees keep a sharp focus on patients in everything we do, building on our long-standing commitment to helping the world be well.

Dr. Michael Rosenblatt
Executive Vice President and
Chief Medical Officer

R&D FOR THE DEVELOPING WORLD

Merck has a long history of both in-house research and engagement with external research partners on diseases that are prevalent in low- and middle-income countries.

We continue to seek ways in which we can contribute expertise and resources to these disease areas.

We apply our research and development expertise and technology to identify potential products that would address unmet needs in resource-poor settings, particularly treatments for infectious diseases, such as HIV and hepatitis C virus (HCV), and for vaccine-preventable diseases, such as pneumococcual disease. We are also involved in a number of product-development partnerships and research collaborations to further develop treatments for both infectious and chronic diseases.

Merck recognizes that new methods and a broader scope of partnering—with both public and private entities—are critical to continuing innovation. This is true for all diseases, and especially true for neglected diseases, for which the relevant expertise spans academia, local public health authorities, industry and international agencies. We plan to continue to expand our interaction with these groups in order to understand key research priorities and opportunities, and to provide relevant expertise and resources.

We also recognize that our access strategy and research capabilities play an important role in recruiting outstanding scientists as well as potential external research alliance partners, who want to know that the fruits of their discoveries will be available to patients worldwide.

Infectious Diseases

About one in four deaths worldwide is caused by infectious and/or parasitic diseases—totalling nearly 15 million people each year. Merck aims to lead in this field and develop new anti-infectives for the treatment of HIV and HCV as well as other infectious diseases. Merck also has a broad range of resources to address neglected tropical diseases (NTDs). For decades, we have been directly engaged with NTDs through program implementation, R&D, and policy and advocacy efforts. We aim to build on our leadership position in the coming years, through a variety of in-house activities and strategic external partnerships.

We are also committed to developing medications that provide benefits to patients in the greatest need, and thus truly change current treatment paradigms.

HIV/AIDS

Merck has sought to make a difference in the fight against HIV, including in the developing world. Since 1985, we've been engaged in R&D efforts for both HIV prevention and treatment. After decades of working to increase access to HIV treatment in the developing world, it is clear that access to care is about more than the price of medicines and that collaboration has been essential to the progress made.

In December 2011, the Merck Global Health Innovation (GHI) fund invested $5 million in Daktari Diagnostics Inc., a developer of point-of-care diagnostic systems for global health applications. Merck GHI led the $10 million round, joined by the company's current investor group. Funds will be used to complete development and bring to market the company's initial products, intended for use in monitoring HIV patients worldwide, and to expand the point-of-care product-development pipeline. Dakarti's product-development pipeline is focused on diagnostic tests for conditions prevalent in low- and middle-income countries, including HIV, tuberculosis, hepatitis, typhoid and conditions related to maternal health. Products are designed for use by minimally trained health workers who support care at district hospitals, health centers and other local health facilities in the developing world.

Merck is committed to working with governments, donors, innovator and generic manufacturers, multilateral organizations and civil society to address the full range of factors affecting access to care.

Read more about our **global HIV-treatment access strategy**.

Hepatitis Therapy

Merck is committed to building on its strong legacy in the field of viral hepatitis by continuing to discover, develop and deliver vaccines and medicines to help prevent and treat viral hepatitis. The WHO reports that every year, 3 to 4 million people are infected with the hepatitis C virus (HCV). About 150 million people are chronically infected and at risk of developing liver cirrhosis and/or liver cancer. More than 350,000 people die from hepatitis C–related liver diseases every year. To address the medical need, company researchers developed the first approved therapy for chronic HCV in 1991 and the first combination therapy in 1998. Extensive research efforts are underway to develop oral therapies that bring innovation to viral hepatitis treatment.

In May 2011, Merck announced that it entered into agreements with Roche, through its respective subsidiaries, to improve treatment, diagnosis and awareness of chronic hepatitis C infection in developed and emerging markets. Researchers affiliated with both companies will collaborate to examine novel combinations of marketed and investigational medicines from both organizations to expedite the availability of potential new treatment regimens for patients with HCV.

NEGLECTED TROPICAL DISEASES

River Blindness

Merck MECTIZAN® Donation Program: One of the most significant outcomes of Merck research in neglected tropical diseases has been MECTIZAN (ivermectin), for treatment of the parasitic infection onchocerciasis (river blindness). After more than a dozen years of research and development, MECTIZAN was approved in 1987 to relieve the agonizing itching that accompanies the disease and to halt the progression toward blindness—both of which dramatically affect the quality and duration of life. With only one annual dose, MECTIZAN is well suited for distribution in remote areas by community health workers, and it is the only well-tolerated drug known to halt the development of river blindness. Merck also donates MECTIZAN for the prevention of lymphatic filariasis (LF), commonly referred to as elephantiasis, in African countries where the disease coexists with river blindness.

Chagas Disease

In alignment with our commitment to discovering a treatment for Chagas disease, in June 2010 we announced plans to initiate a Phase II investigational proof-of-concept clinical study to evaluate the oral antifungal agent posaconazole (marketed as NOXAFIL® oral suspension in the U.S. and the EU, and in several other countries), for the treatment of chronic Chagas disease. In planning the study, Merck consulted with international agencies and research organizations to identify current medical needs and reach consensus on a study design for posaconazole in asymptomatic chronic Chagas disease. Results from this study are expected in 2012.

In January 2012, Merck announced that it had joined 12 other global pharmaceutical companies, as well as governments and other leading organizations, including the World Health Organization (WHO), the Bill & Melinda Gates Foundation and the UK Department for International Development (DFID) in signing the London Declaration, a collaborative effort to accelerate progress toward eliminating or controlling 10 neglected tropical diseases (NTDs) by the end of the decade. To guide the effort against NTDs, the WHO unveiled a new publication and strategy, "Accelerating work to overcome the global impact of neglected tropical diseases—**A roadmap for implementation**."

Other R&D Initiatives for Infectious Diseases

In June 2009, Merck and the not-for-profit organization **Drugs for Neglected Diseases Initiative (DNDi)** entered into a collaborative agreement to support the discovery and development of improved treatments for a range of NTDs. The partnership focuses on numerous NTDs, including visceral leishmaniasis and Chagas disease, both of which infect millions of people. Through a nonexclusive, royalty-free license to DNDi, Merck is contributing small-molecule assets and related intellectual property for DNDi to conduct early development programs for drug candidates for treatment of NTDs, with the primary goal of manufacturing and distributing drugs at low cost to the public sector in resource-poor countries. Merck and DNDi will share joint intellectual property rights on drug candidates generated through early development, and Merck will retain the option to undertake late clinical development and registration of these drug candidates.

In 2011, Merck joined a a newly established R&D consortium called **WIPO Re:Search**, with a mission to accelerate the discovery and development of medicines, vaccines and diagnostics for NTDs, tuberculosis and malaria by making intellectual property (IP) and know-how available to the global health research community. Merck is contributing financial support and IP in partnership with the World Intellectual Property Organization (WIPO), BIO Venture for Global Health (BVGH) and other partners.

In December 2010, Merck announced a partnership with the NYU Langone Medical Center and the PATH Malaria Vaccine Initiative (MVI) that will focus on creating a vaccine that prevents an essential early stage of malaria infection: the invasion of the human liver by the malaria parasite. The partnership leverages Merck's own expertise along with the NYU Langone Medical Center's extensive research into malaria and MVI's critical funding resources.

In March 2009, Merck and Medicines for Malaria Venture (MMV), a not-for-profit virtual research and development organization dedicated to reducing the burden of malaria, announced an exclusive, royalty-free license to pursue development of a licensing agreement for an investigational drug candidate (MK-4815) for the treatment of malaria in the developing world. In June 2012, MMV terminated its license, and all rights to MK-4815 were returned to Merck. We are in the process of identifying a new outlicensing partner.

MSD Spain is a founding supporter of **Fundación Medina**, a nonprofit public-private partnership between MSD, the Junta de Andalucia and the University of Granada that focuses on the discovery of new compounds and innovative therapies for infectious diseases, including malaria.

The Merck Company Foundation supported the **University of Medicine & Dentistry of New Jersey** with a grant of $250,000 over five years (2006–2011) to support the Public Health Research Institute's research of drug targets for tuberculosis.

VACCINE-PREVENTABLE DISEASES

Vaccines are considered one of the most significant public health achievements of the 20th century. Merck has been at the forefront of vaccine advances for decades and remains committed to discovering and developing vaccines to help save lives through its products, partnerships and programs.

MSD-Wellcome Trust Hilleman Laboratories

Merck looks to establish new business models and partnerships for research and development. The **MSD-Wellcome Trust Hilleman Laboratories**, a joint venture between Merck and the Wellcome Trust, marks the first time a pharmaceutical company and a research charity have partnered to form a separate entity with equally shared funding and decision-making rights. At the heart of this concept is the creation of a sustainable R&D organization that operates like a business, but with a not-for-profit operating model, to address the vaccine needs of low-income countries. As well as developing new vaccines in areas of unmet need, the Hilleman Laboratories, based in India, will also work to optimize existing vaccines, an important and powerful way of increasing the impact of vaccination in resource-limited settings.

The partners have strengths that are complementary in many ways. The Wellcome Trust brings exceptional public health expertise, in-depth policy understanding and experience in biomedical research to the partnership. Merck brings expertise in vaccine development and experience in working with a diverse range of stakeholders including international organizations, governments, nongovernmental organizations and philanthropic organizations.

The Hilleman Laboratories is based in India to facilitate engagement and partnership with a broad range of experts in vaccine research, policy and manufacturing to develop and mature its R&D pipeline. Its first R&D laboratory is now operational at the Jamia Hamdard University, in New Delhi.

Specific projects will be selected through consultation with the international community and careful technical assessment. In 2011, the organization announced its first project, a feasibility study on how new technologies might be used to develop a rotavirus vaccine designed specifically to meet the needs of developing countries. The Hilleman Laboratories will partner with external collaborators with expertise in formulation and relevant technologies. To learn more, **click here**.

Serum Institute of India

In August 2011, we announced an agreement to work with the Serum Institute of India Limited, an Indian company, to develop and commercialize a pneumococcal conjugate vaccine (PCV) for use in emerging and developing-world countries. It is estimated that one out of every two children immunized worldwide is by a vaccine manufactured by Serum Institute. In addition, Merck has developed many of the world's vaccines for children, adolescents and adults.

Human Papillomavirus

In 2006, Merck introduced GARDASIL® [Human Papillomavirus Quadrivalent (Types 6, 11, 16, 18) Vaccine, Recombinant], a vaccine to prevent cervical cancers, precancerous and dysplastic lesions, and genital warts caused by the human papillomavirus (HPV). Cervical cancer is the second most common cause of cancer death in women worldwide, resulting in nearly a half-million diagnoses and 240,000 deaths each year. Many of these deaths are in the developing world, where access to preventive screening is often rare and a vaccine could make a measurable impact on women's health.

Merck partnered with the international nonprofit organization PATH to provide GARDASIL for the conduct of HPV-vaccine demonstration projects in Peru, Vietnam and India. GARDASIL was provided to vaccinate approximately 30,000 appropriate girls participating in HPV Vaccines: Evidence for Impact demonstration projects. The overall initiative was designed to (1) strengthen the capacity of developing countries to prevent cervical cancer by generating and providing necessary evidence for public sector introductions of HPV vaccines; (2) inform global advocacy efforts; and (3) provide analyses to help accelerate access to HPV vaccines. The projects' outcomes suggest that

high coverage with HPV vaccine can be achieved through various delivery strategies in the countries studied.[1]

In addition, in 2007, Merck announced the GARDASIL Access Program (GAP), a charitable donation program through which Merck has committed to donate at least 3 million doses of GARDASIL to eligible applicants in lowest-income countries around the world. The program enables participating countries to gain operational experience in designing and implementing HPV vaccination projects. **Learn more**.

ROTAVIRUS

In 2006, Merck introduced ROTATEQ® (rotavirus vaccine, live, oral pentavalent), a vaccine against rotavirus, which causes hundreds of thousands of deaths in children in the developing world each year. In 2009, Merck completed clinical trials of the PATH Rotavirus Vaccine Program, which studied the safety and efficacy of ROTATEQ in Bangladesh, Vietnam, Ghana, Kenya and Mali. Trials at all sites in Africa and Asia involved more than 7,500 infants and were published in the August 2010 issue of *The Lancet*. The results of these studies supported expanded WHO recommendations to promote global use of ROTATEQ.

In addition, as part of our partnership with the Government of Nicaragua, Merck assessed the public health impact of introducing ROTATEQ into a GAVI-eligible country. The significant public health impact of the introduction and widespread use of ROTATEQ in this program was demonstrated through a case control study of the effectiveness of vaccination. Over a two-year period, three doses of Merck's rotavirus vaccine reduced the risk of hospitalization or emergency-department visits for severe rotavirus disease by 76 percent for health centers and hospital visits combined. The vaccine also demonstrated high vaccine effectiveness (87 percent) against severe disease among children younger than 12 months of age at the time of onset of acute disease.

[1] LaMontagne et al, *Bull World Health Org*, 2011.

CHRONIC DISEASES

According to the WHO, chronic diseases, such as heart disease and diabetes, are by far the leading cause of mortality in the world, resulting in 63 percent of all deaths. Out of the 36 million people who died from a chronic disease in 2008, 9 million were under 60 years of age, and 90 percent of these premature deaths occurred in low- and middle-income countries.

Simcere Pharmaceutical Group

In July 2011, Merck and China's Simcere Pharmaceutical Group announced the signing of a framework agreement to establish a joint venture focused on serving China's rapidly expanding healthcare needs by providing significantly improved access to quality medicines in major therapeutic areas. This innovative partnership will combine the extensive resources and expertise of a global healthcare company with a leading Chinese pharmaceutical company in support of Merck and Simcere's goal of building a strategic partnership with development, registration, manufacturing and sales capabilities. Its initial focus will be branded pharmaceutical products for cardiovascular and metabolic diseases.

MERCK BIOVENTURES

Merck BioVentures (MBV), is a cross-functional team within Merck, that is focused on delivering high-quality biosimilar products to the patients that need them, and capitalizing on the imminent patent expirations of a number of currently marketed recombinant biologic medicines.

Recombinant Biologic Medicines

Recombinant biologic medicines are large, complex molecules that may be as much as a thousand times larger than their small-molecule drug counterparts. Predominantly due to their size, biologics are typically injected into the body, whereas many small molecules can be taken orally. The manufacturing processes for biologics also contrasts significantly from those of small-molecule drugs.

Biologics are generally produced in complex, genetically engineered living systems such as bacteria or cultured mammalian cells. This contrasts substantially from the chemical reactions used to manufacture small molecules. For this reason, the properties of the biologic often depend directly on the engineered organisms and the manufacturing process.

A pathway for approving small-molecule generic drugs was established in 1984. This original legislation, however, was not designed to encompass biologic molecules that, at that time, were in their relative infancy. With the pending expiration of patents covering some important biologic products, the laws and policies governing development of biosimilars are still emerging around the world.

Merck's Position in the Biologics Industry

Merck has a long legacy of biologic product development, including its current work in vaccines for prevention, innovative biologic therapies for disease treatment, and the development of biosimilars to enhance access to biologic treatment options. Because of this focus on novel biologics and biosimilars, we advocate for consistent, high-quality standards using state-of-the-art scientific techniques and knowledge, while ensuring that biosimilars maintain the expected benefits of reaching the broader patient population.

We are confident that we have established the capabilities, resources and expertise necessary to become a leader in delivering biosimilars.

Establishing the Scientific Standard for Biosimilars

We support developing an efficient approach to bringing biosimilars to market and recognize the primary importance of patient safety. Because the complexity of developing and manufacturing biosimilars results in a product that is similar, but not identical to, the original product—the adequate characterization of biosimilars is essential. We believe that all biosimilar applicants should be required to conduct clinical trials that demonstrate safety and efficacy for biosimilar products. The impact of interchanging products on safety, efficacy or immunogenicity cannot be adequately predicted by analytical characterization, structure-function relationships or animal studies. As such, Merck supports a policy that limits the decision on drug choice to prescribers.

The regulatory landscape for biosimilars development and approval is evolving rapidly. The FDA issued draft guidance on biosimilar product development in February 2012, the first step in implementing a shortened U.S. regulatory pathway for biosimilars. The draft guidance refers to the "totality-of-evidence", which bases biosimilar development on a strong scientific foundation and will require companies to provide extensive analytical, preclinical and clinical data to demonstrate biosimilarity.

The agency has introduced the opportunity for extrapolation with scientific justification, which would allow companies to market biosimilars for multiple indications. The draft guidance also distinguishes between biosimilarity and interchangeability. Establishing interchangeability between a biosimilar and an

innovator biologic would allow for substitution, although the FDA is determining specific criteria.

While still in draft form, the draft guidance lays out rigorous scientific and clinical requirements to establish biosimilarity in alignment with Merck's biosimilar development strategy. We will, of course, adapt our approach as the guidance is finalized and new legal requirements are implemented.

Portfolio and Partnerships

Merck deployed a biosimilars development strategy to take advantage of the fact that over 40 biologic therapeutics—representing estimated cumulative worldwide sales of approximately $60 billion—will lose patent protection between 2008 and 2015. Merck BioVentures is developing a well-diversified portfolio of candidates targeting several important clinical indications. We have disclosed three developmental programs—a granulocyte colony stimulating factor (GCSF) candidate, a pegylated GCSF and a biosimilar etanercept candidate. We anticipate that our biosimilar programs will begin to enter late-stage development by 2012.

In January 2011, we announced a strategic alliance with Parexel to provide a broad range of regulatory and clinical services to Merck BioVentures, including exclusivity for certain developmental biosimilar candidates. This agreement positions Merck BioVentures for success with an industry-leading partner that has the expertise and resources to conduct clinical development of the company's portfolio of candidates, which will allow timely delivery of products to the marketplace.

In June 2011, Merck announced a global strategic collaboration with Hanwha Chemical Corporation to develop and commercialize a candidate biosimilar form of ENBREL® (etanercept). This candidate represents a valuable addition to our broad biosimilars portfolio as we advance our strategy to provide patients with improved access to biologic therapies.

In September 2011, Merck entered into a multiyear capacity-sharing agreement with MedImmune. The agreement provides Merck with flexible access to state-of-the-art biologics manufacturing operations and allows for rapid scale-up of programs.

GLOBAL BURDEN OF DISEASE

The chronic diseases that Merck researches are aligned with major global burdens of illness, as defined by the World Health Organization (WHO) Global Burden of Disease Project.

The chronic diseases that Merck researches not only rank high on the WHO list of disease burdens of developed countries but also are projected to become prevalent in the developing world and middle-income markets by 2030. Our research into vaccines and infectious diseases addresses major burdens of illness that are prevalent in all countries, but our preventative treatments could have the greatest immediate impact in the developing world, where healthcare infrastructure is weak or nonexistent.

Considering **Merck's pipeline** and the list of products we currently market, we estimate that Merck addresses 53 percent of the top 20 global burdens of illness as defined by the WHO.[1]

[1] World Health Organization. The Global Burden of Disease: 2004 Update. WHO Press, Geneva, 2008.

LEADING CAUSES OF DISEASE, CONDITION OR INJURY, BY RANK	2008 Mortality[1]	2030 Projected Mortality[2]	2008 Projected Disease–Adjusted Life Years[3]	2030 Projected Disease–Adjusted Life Years[4]
Ischemic heart disease	1	1	4	2
Cerebrovascular disease	2	2	6	4
Lower respiratory infections	3	4	1	6
Chronic obstructive pulmonary disease	4	3	12	5
HIV and AIDS	5	10	3	10
Diarrheal diseases	6	20	5	19
Trachea, bronchus, lung cancers	7	5	NR	20
Road traffic accidents	8	7	8	3
Diabetes mellitus	9	6	17	11
Tuberculosis	10	22	15	25
Unintentional injuries	11	11	7	9
Prematurity and low birth weight	12	23	9	13
Neonatal infections	13	21	11	12
Hypertensive heart disease	14	8	NR	NR
Stomach cancer	15	9	NR	NR
Self-inflicted injuries	16	13	19	23
Malaria	17	NR	13	NR
Birth asphyxia and birth trauma	18	NR	10	16
Nephritis/nephrosis	19	12	NR	NR
Cirrhosis of the liver	20	18	NR	NR
Unipolar depressive disorders	NR	NR	2	1
Liver cancer	22	14	NR	NR
Colorectal cancer	21	15	NR	NR

[1] Statistics from Report—*Regional Projects of Deaths and DALYs for 2008, 2015, 2030: Mortality—Baseline Scenario, 2008, WHO regions.*
[2] Statistics from Report—*Regional Projects of Deaths and DALYs for 2008, 2015, 2030: Mortality—Baseline Scenario, 2030, WHO regions.*
[3] Statistics from Report—*Regional Projects of Deaths and DALYs for 2008, 2015, 2030: Standard DALYs—Baseline Scenario, 2008, WHO regions.*
[4] Statistics from Report—*Regional Projects of Deaths and DALYs for 2008, 2015, 2030: Standard DALYs—Baseline Scenario, 2030, WHO regions.*
Note: NR = Not reported because less than 1% total burden.

PRODUCT REGISTRATION

At Merck, we are committed to registering our medicines and vaccines in a timely fashion in markets where they are needed.

A major goal is to reduce the historic gap in product introduction between developed and developing countries. One way we strive to reach this goal is by prequalifying medicines and vaccines through the World Health Organization (WHO). WHO prequalification is required by UN agencies, which often procure healthcare products throughout developing countries in the absence of reliable national medicines authorities that would certify products for meeting required quality, safety and efficacy standards. As such, prequalification is an important step toward fostering global access.

- In order to facilitate institutional purchases of family planning products and provide quality assurance, Merck has sought WHO prequalification for EXLUTON® (lynestrenol oral contraceptive), IMPLANON® (etonogestrel implant) and MARVELON® (desogestrel – ethinyl estradiol).
- In May 2009, **GARDASIL®** [Human Papillomavirus Quadrivalent (Types 6, 11, 16, 18) Vaccine, Recombinant] was the first cervical cancer vaccine awarded WHO prequalification
- In October 2008, Merck announced that it had received WHO prequalification for ROTATEQ® (Rotavirus Vaccine, Live, Oral, Pentavalent)
- In December 2008, Merck received WHO prequalification for MMR-II® (Measles, Mumps, Rubella Virus Vaccine Live)
- In December 2008, our treatments for HIV/AIDS [STOCRIN® (efavirenz), CRIXIVAN® (indinavir sulfate) and ATRIPLA® (efavirenz 600 mg/emtricitabine 200 mg/tenofovir disoproxil fumarate 300 mg) received WHO prequalification
- We are committed to work with the WHO for the prequalification of ISENTRESS® (raltegravir)

To increase the transparency of the company's product registration status, we are disclosing registration information for ROTATEQ, GARDASIL and our four antiretrovirals (ARVs), and updating this information every six months. Click below for details:

- **ROTATEQ**
- **GARDASIL**
- **ATRIPLA**
- **CRIXIVAN**
- **ISENTRESS**
- **STOCRIN**

Learn more about our commitment to register our:

- **HIV/AIDS medicines**
- **Women's health products**
- **Vaccines**

COMMERCIALIZATION

Merck strives to commercialize our products in a way that both develops our business and meets local needs responsibly and efficiently.

Through our worldwide differential-pricing framework, we are committed to making our medicines and vaccines more affordable to more people by applying a differential-pricing approach that takes into account level of economic development, channel and public health need.

For example, in the developing world, Merck offers ROTATEQ® (Rotavirus Vaccine, Live, Oral, Pentavalent) and GARDASIL® [Human Papillomavirus Quadrivalent (Types 6, 11, 16, and 18) Vaccine, Recombinant] at an access price that is significantly less than the price of these vaccines in developed markets. The access price is exclusive to the public sector of GAVI-eligible countries, meeting the needs of the developing world by facilitating access to these innovative vaccines in the poorest countries, while making sure they remain affordable and sustainable in the long term.

We believe that our pricing approach contributes to wider access to our vaccines, while taking into account our need to continue investing in vaccine research, development and production. In more developed middle-income countries, Merck provides our vaccines at tiered prices in relation to a country's ability to pay.

We also invest in activities to increase knowledge among patients and physicians, because we believe that providing support to third-party medical, scientific and patient organizations is an important way to improve health and advance patient care. **Learn more**.

Learn more about pricing of our products.

SALES & MARKETING

In order to provide the best possible care to their patients, doctors rely on pharmaceutical companies to provide accurate and balanced information about their medicines and vaccines.

Merck believes the best way to provide this information is for pharmaceutical companies to maintain informative, ethical and professional relationships with healthcare providers. Our interactions with providers, other customers and consumers are governed by laws and regulations, and for our long-standing global code of ethical conduct and guidance, *Our Values and Standards*. We enforce these through our global business practices and compliance program.

We recognize that both our reputation for integrity and the trust that our stakeholders place in us are dependent on our ethical practices. For this reason, we want to make certain that the ways in which we market and sell our products to our customers—healthcare professionals, health insurers and governments—provide with accurate, balanced and useful information so that prescribers can make the best decisions for their patients. By adhering to the highest ethical sales and marketing standards, we can be sure that scientific information is the predominant factor in prescribing decisions, which helps to reinforce our reputation for providing high-quality products and for contributing to improvements in public health.

Our professional sales representatives and other employees inform our customers about our medicines and vaccines and their appropriate use. In some countries, where permitted by law, we also directly inform patients and other consumers about diseases and available treatments that they may wish to discuss with their doctors.

We believe that our marketing, sales and advertising activities make an important contribution to medicine by informing our customers about treatment options that are based on the most current scientific information and findings from rigorous clinical studies. We take our marketing, sales and advertising responsibilities seriously and evaluate these activities regularly to ensure they are consistent with laws and regulations and with company policies and values. **Learn more**.

PERFORMANCE & COMMITMENTS

Performance

In 2011, Merck received no warning letters or untitled letters from the U.S. FDA Office of Prescription Drug Promotion (OPDP) or from the Advertising and Promotional Labeling Branch (APLB) of the FDA Center for Biologics Evaluation and Research.

SALES & MARKETING SUMMARY	2009	2010	2011
Number of warning letters or untitled letters from DDMAC[1] or APLB[2] in the U.S.	NA	0	0

[1] DDMAC: U.S. FDA Division of Drug Marketing, Advertising and Communication

[2] APLB: Advertising and Promotional Labeling Branch (APLB) of the FDA Center for Biologics Evaluation and Research.

NA: Data not available.

Commitments

- Merck discloses payments to U.S.-based healthcare professionals who speak on behalf of the company or who provide consultation to Merck on the development of our products and strategies
- Merck adheres to established country-specific regulations and industry codes that require disclosure of payments to healthcare professionals (Japan, U.K., France) and patient associations (Europe)
- Merck will promptly investigate all good-faith reports of conduct believed to be unethical or in violation of the company's policies, values or standards, to maintain a process that ensures appropriate escalation of such concerns and to take appropriate remedial action in response to such concerns

SALES & MARKETING PRACTICES

Our sales and marketing practices are governed by external laws, regulations and industry codes of conduct; as well as by our global Code of Conduct, business practices and compliance program.

These practices are monitored and enforced to ensure that our interactions with customers and consumers help inform their decisions accurately and in a balanced manner. We believe that compliance, in letter and spirit, with all policies governing scientific, business and promotion-related activity is a corporate and individual responsibility of the highest order. Our ethical behavior will ensure that scientific information predominates in prescribing decisions.

U.S. PhRMA Code Compliance

Some have expressed concerns over the way pharmaceutical companies provide information to healthcare professionals and consumers. Merck's long-standing Code of Conduct, business practices and compliance program have sought to prevent and address inappropriate practices. We are constantly evaluating our policies and practices and revising them as appropriate.

Over the past several years, the pharmaceutical industry as a whole has recognized that more needed to be done to address concerns raised by public officials and stakeholders in the healthcare community. The revised PhRMA Code sets the standards that govern the industry's sales and marketing practices in the United States and ensures that companies have adequate policies and procedures in place to comply with this Code.

Key Components of the PhRMA Code

Among the Code's key components is an annual requirement for company CEOs and chief compliance officers to certify personally that they have processes in place that foster compliance with the Code. The Code also encourages companies to obtain third-party verification of their compliance policies and procedures. Merck has completed PhRMA Code certification in each of the last three years. In 2011, an independent third party validated that Merck's compliance program fosters compliance with the Code.

Other requirements of the Code had previously been incorporated into Merck's already-strong ethical practices. For example, the company follows the standards for commercial support of Continuing Medical Education established by the Accreditation Council for Continuing Medical Education (ACCME), and our compliance program already required that company representatives be periodically assessed to make sure they comply with relevant company policies and standards of conduct.

HEALTHCARE PROFESSIONALS

Merck's Guiding Principles for Ethical Business Practices with the medical and scientific community include:

- We provide current, accurate and balanced information about Merck products, we transmit sound scientific and educational information, and we support medical research and education
- Merck employees are prohibited from offering healthcare professionals items of personal benefit, such as tickets to sporting events, support for office social events or gift certificates to stores or golf outings. Where permitted, we may occasionally provide healthcare professionals with approved educational items that are not of substantial monetary value and that are intended primarily for educational purposes. Such materials may include medical textbooks, medical journals or anatomical models.
- Merck employees and others speaking on Merck's behalf may provide presentations and discussions specifically designed to provide the type of information that practicing medical and healthcare professionals have indicated to Merck that they need and find most useful in the treatment of their patients, in accordance with FDA regulations and regulations of other countries. In connection with such presentations or discussions, occasional modest meals may be offered to attendees and must occur in a venue and manner conducive to informational communication.
- A Merck representative may offer occasional modest meals to healthcare professionals in connection with an informational presentation; however, such meals must be in accordance with local codes and regulations

Our sales representatives must provide truthful, non-misleading information in their interactions with the medical and scientific community. Our compliance program is consistent with applicable laws and regulations, and is aligned with the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) Code of Pharmaceutical Marketing Practices, as well as with regional and country industry codes, such as the Pharmaceutical Research and Manufacturers of America (PhRMA) Code and the Compliance Program Guidance for Pharmaceutical Manufacturers, published by the Office of the Inspector General, U.S. Department of Health and Human Services.

Learn more about Merck's Code of Conduct and its enforcement.

INFORMATION & INTERACTION

We inform healthcare professionals about appropriate use of our products based on the results of rigorous clinical studies.

All Merck sales and marketing activities are conducted in accordance with our **Guiding Principles for Ethical Business Practices with the Medical and Scientific Community**. These principles are aligned with national regulations, worldwide industry codes, including the **International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) Code of Pharmaceutical Marketing Practices**; and the **World Health Organization's Ethical Criteria for Medicinal Drug Promotion**.

These principles serve as a bridge between country laws, regulations, industry guidelines, and the company's values and standards, enabling us to interact with the medical and scientific communities, meet our ethical and legal obligations, and contribute to improvements in human health.

We provide promotional information in several ways, including:

- Product discussions between our professional representatives and healthcare professionals
- Promotional meetings sponsored and organized by Merck
- We also provide nonpromotional information through educational and scientific activities, including:
- Scientific presentations at medical conferences
- Published articles and related scientific studies in peer-reviewed scientific journals
- Web-based tools such as **MerckMedicus.com**

Our interactions and content must provide truthful, balanced and non-misleading information to healthcare professionals. All our interactions with healthcare professionals are highly regulated by the government through laws such as the U.S. Anti-Kickback Statute; the Food, Drug & Cosmetic Act; the U.S. Foreign Corrupt Practices Act (FCPA); and anti-bribery laws in other countries.

Merck conducts anticorruption/anti-bribery e-learning and face-to-face training with all employees that engage with foreign/government officials. In many countries, healthcare professionals are government employees or are advisers to the government on matters that could affect our business.

Merck has a corporate policy and procedure, as well as training for employees, on anti-bribery, and standards for interactions with government officials, including detailed guidance that:

- Provides employees with a deeper understanding of the basic principles of the FCPA and the procedures required for identifying and interacting with a foreign/government official
- Outlines the factors that must be considered and the rigorous evaluation process to be followed in assessing whether to proceed with a particular interaction
- Highlights the importance of individual country guidance pertaining to the evaluations conducted under the FCPA and local anticorruption regulations

Continuing Medical Education (CME) and Continuing Education (CE)

Merck sponsors educational programs designed to share medical and/or health economic information. Merck's CME/CE Grant Program supports independent educational programs that we believe are most likely to improve healthcare professional performance and patient outcomes. We are committed to ensuring that our CME/CE programs are educational and not promotional. Through them, our goal is to increase physician knowledge about the latest scientific data and healthcare topics that result in improved patient care.

The environment in which we sponsor or support educational programs worldwide is complex, governed by a multitude of laws, regulations and medical or industry association guidelines. We are committed to honoring them all in the countries in which we operate.

CME programs that we support or sponsor are governed by an internal policy and also must be aligned with appropriate standards such as the Accreditation Council for Continuing Medical Education (ACCME) standards for commercial support of CME in the United States. These standards specify independence, financial disclosure and other requirements applicable to CME programs sponsored by commercial entities, including pharmaceutical manufacturers. **Click here** for a list of grants of more than $500 made to U.S. organizations by the company's Global Human Health Division in support of independent, accredited educational programs for healthcare professionals.

Merck Medical Forums

Merck delivers balanced medical and scientific information to healthcare professionals within the U.S. through its Merck Medical Forums, which are conducted by external speakers. Speakers are selected based on their expertise in the subject matter. By attending a Merck Medical Forum, healthcare professionals participate in interactive learning on relevant therapeutic and healthcare industry **topics**. The goal of these interactions is to help attendees achieve improved medical results for their patients.

With strict standards for conducting Merck Medical Forums, we comply with the **PhRMA Code on Interactions with Healthcare Professionals** as well as FDA regulations, which make sure that any product presentation is appropriately balanced with the product's potential benefits and risks and is consistent with approved product labeling.

Merck discloses certain payments to U.S. medical and scientific professionals who speak on behalf of the company. For a list of these disclosures, **click here**.

Obtaining Services from External Healthcare Professionals

Merck engages the service of external healthcare professionals only when we do not have the specialized talent or expertise internally, or when an external viewpoint is critical. Compensation provided to these healthcare professionals is based on fair market value of the service. Merck is confident that compensation provided to external healthcare professionals is fair and reasonable, and is aligned with fair market value of the service in the home country of the healthcare professional providing the service.

Prescription Product Samples

Where sampling is permitted, Merck has established country-specific guidance and policies on providing prescription product samples to healthcare professionals. This guidance specifies the appropriate distribution and use of samples to safeguard against the potential for misuse or abuse of our products, or the diversion of our products to inappropriate channels. In accordance with the law and ethical practices, we do not provide product samples to reduce or discount the price paid or reimbursed, or in exchange for prescribing, purchasing or contracting for a Merck product or for recommending a Merck product for formulary status.

Unapproved or "Off-Label" Use of Our Medicines and Vaccines

In accordance with laws, regulations, internal policies and ethical practices, our professional representatives and other members of our sales and marketing team are not permitted to promote product uses that are not consistent with the approved product label, sometimes referred to as "off-label" promotion. We have policies and training in place to address violations, and we ensure that physicians are aware that we do not encourage off-label use.

PATIENTS

Merck believes that direct-to-consumer (DTC) advertising can be an important and helpful way to inform patients about diseases that may be relevant to them and about therapeutic options they may want to discuss with their physicians.

Such advertising is only conducted by Merck in countries where direct-to-consumer advertising is permitted.

Credible data demonstrate that DTC advertising can have a positive impact on patient health in terms of diagnosis, treatment and adherence to prescribed therapies.[1,2] Ultimately, the decision of what treatment, if any, a patient receives rests with the physician, following consultation and discussion with the patient.

Merck tries to help consumers achieve better health outcomes by delivering accurate, relevant and understandable information on disease prevention, identification and potential treatment. To remain true to this goal, Merck adheres to the letter and spirit of FDA regulations and guidelines governing DTC promotion, meets or exceeds all Pharmaceutical Research and Manufacturers of America (PhRMA) guidelines on DTC advertising, and follows a comprehensive set of internal policies and practices when engaging in DTC advertising within the U.S.

Merck has a long-standing policy of voluntarily submitting new U.S.-based DTC advertising campaigns to the FDA for its review and comment before running the campaign. Under Merck's **DTC policies and practices**, the information provided in our DTC advertising campaigns must:

- Contain appropriate product benefit and risk information
- Be appropriately balanced, consistent with FDA regulations, and use appropriate "taste and tone"
- Run at appropriate times during the day and during appropriate programs
- Be approved by Merck's medical and legal departments to ensure that the medical community's views have been considered and that the content is consistent with approved labeling

In addition, we include information on **Merck's Patient Assistance Programs**, along with a toll-free phone number for more information, in all new U.S.-based DTC print and television advertisements.

We inform healthcare professionals about our products before we advertise them to consumers, and we do not launch DTC advertising in the United States until at least six months after a new product has been approved. We also implement comprehensive programs to educate physicians and other prescribers about a new product before starting product-specific DTC broadcast advertising in the U.S. These principles and our practices are reflected in the PhRMA Guiding Principles on Direct-to-Consumer Advertisements about Prescription Medicines. **Learn more**.

Disease Awareness

There are concerns that some diseases are underdiagnosed and undertreated. Merck is committed to ensuring that healthcare practitioners, patients and caregivers are informed about diseases such as high cholesterol, high blood pressure, osteoporosis and asthma, in which we have extensive knowledge and expertise. To answer questions about symptoms, diagnosis and potential treatment options, we sometimes provide grants to organizations with specific expertise in disease areas of interest to us. For a list of grants to medical, scientific and patient organizations, **click here**.

[1] Aikin K, Swasy J, Braman A. Patient and Physician Attitudes and Behaviors Associated with DTC Promotion of Prescription Drugs: Summary of FDA Survey Research Results, Final Report, U.S. Department of Health and Human Services, Food and Drug Administration, Center for Drug Evaluation and Research, 19 November 2004.

[2] See for example: McGlynn EA, et al. The quality of healthcare delivered to adults in the United States. *N Engl J Med.* 2003;348(26):2635-4.

TRAINING

As a condition of their continued employment, all of our sales and marketing employees are required to be certified periodically on sales and marketing practices.

In the United States, for example, employees who do not satisfactorily meet these training requirements may not conduct specific activities on their own and must complete the training again until they meet the requirements.

All new employees receive testing and certification on relevant policies and Merck's ethical operating standards. And although many of our employees who market and sell our medicines and vaccines have advanced scientific or medical degrees and backgrounds, our sales representatives must complete general sales and product training. This includes training specific to the country where the employee is based and covers the scope of the employee's responsibilities to ensure compliance with applicable laws and regulations.

For example, our sales representatives in the United States are required to understand, among other things, their responsibilities under the Anti-Kickback Statute, the U.S. Prescription Drug Marketing Act and all applicable FDA promotional regulations.

After this initial training, we require periodic training aimed at recertifying employees on relevant policies and practices according to local and functional requirements. In addition to mandatory training on our Code of Conduct, employees receive training on other levels of business practices and compliance, according to their roles and responsibilities. We evaluate and update the content for all marketing and sales training periodically to ensure it remains relevant and current.

SALES & MARKETING COMPLIANCE

Our employees worldwide understand that they should bring to the attention of management workplace issues of any type, including potential violations of law, company policy or the company's Code of Conduct.

Merck strives to provide a work environment that encourages employees to communicate openly with management, without fear of retaliation or retribution.

In 2008, we established comprehensive corporate guidelines for escalation, investigation, remediation and recognition of noncompliance events, which we are in the process of implementing across our different divisions and regions. Through these guidelines, we will ensure that events are escalated to the appropriate place within the company, and properly and thoroughly investigated. This approach also will ensure the appropriate disciplinary action is taken, up to and including dismissal when necessary.

In addition to these channels to address potential violations, there are a variety of resources for employees to raise concerns in a confidential manner, without fear of retaliation.

We believe that our marketing, sales and advertising activities make an important contribution to medicine by informing our customers of treatment options based on the most current scientific information and findings from rigorous clinical studies. We take our responsibilities related to this seriously and evaluate our marketing, sales and advertising activities on an ongoing basis to ensure they are consistent with laws and regulations as well as Merck policies and values. **Learn more** about the Office of Ethics.

Review of Promotional and Educational Materials

The review and approval of global promotional and educational materials for healthcare practitioners follows a comprehensive and strict process as outlined in the "International Medical Media Standards" (IMMS) guidance document. The IMMS principles are followed by Merck employees on a worldwide basis and define the concept of "fairness and balance" in the communication of scientific/educational information. At Merck, all such materials are reviewed and approved by medical and legal personnel, captured in a global data base, and assigned a unique identifying number and expiration date. All regional and country medical personnel involved in the review and approval of promotional/educational material receive comprehensive training on corporate policies, IMMS, the medical-reviewer role, and the required database functionalities.

In addition to our global Code of Conduct for interactions with healthcare professionals, to minimize noncompliance and foster ethical promotional practices, Merck has several mechanisms in place:

- Hiring people with the right values and then reinforcing them: We look for people who we believe have a similar value system. In our interview process, we try to ascertain how candidates make decisions. We want people who will want to commercialize our medicines and vaccines based on the merits of our products and the science.
- Strict control over promotional materials: Every promotional claim we make throughout the world has to be approved by our medical and legal experts for accuracy and balance, in accordance with legal requirements and ethical considerations. In the United States, we also submit new promotional materials for new product approvals and new indications to the FDA prior to use.
- Strong medical and legal oversight: Merck's medical and legal teams are active partners to help foster ethical promotional practices, helping to achieve business goals by reducing risk and increasing compliance with the laws and guidelines in a highly regulated environment. Our medical and legal teams are also involved in training the sales force to provide balanced information to physicians and healthcare decision-makers.
- Promotional approach that reflects customer input: Our sales and marketing teams actively seek input from healthcare professionals, consumers and payers to understand their

needs regarding our common goal of improving patient outcomes. We incorporate their feedback into training efforts and promotional activities to build trusting partnerships with our customers and to achieve our common goal.

- Performance management system that rewards ethical behavior: Our company-wide annual performance management system considers not only what an employee has achieved but also how they have done so, with a specific focus on ethical behaviors.
- Working to raise marketing standards industry wide: Merck is active in numerous industry association committees that address marketing standards.
- Global risk assessment tool: We have developed a process to assess risks associated with sales and marketing-related business practices and processes, benchmarked to industry best practices. It has been implemented so far in 29 countries around the world. By the end of 2009 it will cover all major country operations.

PRICING

Throughout the world, healthcare costs are rising for a variety of reasons; chief among them are greater utilization and complexity of services and technologies that convert once-fatal diseases into chronic conditions.

As populations continue to age in the developed world, and better health technologies and pharmaceuticals improve health and prolong life, payers are increasingly focusing on pharmaceutical spending in their overall healthcare budgets.

The pharmaceutical industry faces a variety of healthcare systems and government policies in developed countries, where it must balance patient access to the best treatments within the constraint of limited budgets. In most European countries and in Canada, the government both regulates healthcare and provides it to its citizens. We understand these management and budgetary pressures.

Despite differences in national approaches, we price our products in all OECD (Organization for Economic Co-operation and Development) countries to foster access while ensuring a reasonable return on our investment. Our prices around the world are determined by several factors, including the value of our products to patients, payers and physicians relative to competitor products; the ability and willingness of various customers—including national, regional or local institutional payers, physicians, employers and patients—to pay for our products; and the cost and value of treatment options, such as hospitalization.

The prices of our medicines and vaccines also reflect government regulation and currency fluctuation. While striving to maintain a consistent global approach, Merck also considers the national, competitive and regulatory conditions of each market individually. The price a consumer pays is also affected by duties and tariffs imposed on imported medicines and vaccines, as well as price markups by intermediaries, including wholesalers and pharmacies.

Given the choices available within a class of drugs today, powerful and sometimes monopolistic buyers in the pharmaceutical marketplace—particularly governments and national health systems—have intensified pricing pressure throughout the developed world. In price-controlled environments (particularly prevalent in Europe), most governments use international price comparisons and therapeutic reference pricing as levers to set their own purchasing price. In addition, in Europe and a growing number of other developed markets, decisions about medicines are increasingly being relegated to regional payers, making the challenge of ensuring access to new treatments extend beyond price alone.

In the private sector, particularly in developed countries like the United States, price competition has been spurred by private health insurance plans. These payers are able to negotiate significant rebates and discounts with pharmaceutical manufacturers, based on their ability to direct utilization. Where competition exists among health insurance plans, patients are able not only to obtain healthcare and their medicines at competitive prices but also to take advantage of innovative pharmacy services that have improved the quality of pharmacy care.

HEALTH LITERACY & HEALTHCARE DISPARITIES

At Merck, we believe that people must be at the center of their healthcare.

For more than 100 years, Merck has provided unbiased and independently reviewed health information to the public and to healthcare professionals, directly and through independent enterprises as a not-for-profit service.

KEY DEFINITIONS

Healthcare Disparities—Differences or gaps in care experienced by one population compared with another population, due in part to:

- **Lack of access to care**
- **Provider biases and other issues**
- **Poor provider communication**
- **Poor health literacy**

Health Literacy (U.S.)—The degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions.

The Merck Manuals

In 1899, we published the first edition of The Merck Manual, a 192-page resource book designed to aid physicians and pharmacists. By the 1980s, The Merck Manual was the world's best-selling medical text and had been translated into 17 languages. The 19th edition, published in July 2011, now comes with a free app for pocket mobile devices. This updated edition reflects progress in both medicine and technology as it keeps pace with the many electronic platforms used to deliver information to healthcare professionals.

In 1997, we created The Merck Manual—Home Edition to provide the benefits of the Manual for the general public. In its third edition, renamed The Merck Manual—Home Health Handbook, more than 3 million copies have been sold and translated into 12 languages. As part of our commitment to provide medical information for those who want it, we offer the content of these Merck manuals on the Web free of charge. Registration is not required, and use is unlimited. The Merck Manual on the Web is updated to ensure that its information is as current as possible. In addition, during 2011, we donated 30,000 copies of The Merck Manual to nongovernmental organizations (NGOs) for distribution to physicians, nurses and community health workers throughout developing countries.

We also publish other books, such as The Merck Index for chemists and biologists (since 1889); The Merck Veterinary Manual (since 1955), for veterinarians; The Merck Manual of Health & Aging, which provides professionals and consumers with useful health care information for older adults; The Merck/Merial Manual for Pet Health, which covers the full spectrum of today's pets—from dogs, cats and horses to birds, reptiles, fish and other exotic pets; and, most recently, The Merck Manual of Patient Symptoms, a guide for medical students, residents, nurse practitioners and physician assistants. **Learn more**.

MerckEngage

MerckEngage.com, a free online tool available in the U.S., offers resources that reinforce healthy lifestyle choices, provide disease-specific education, support adherence to therapy, and help U.S. healthcare consumers have more productive interactions with their healthcare professionals. The site also provides support and encouragement for caregivers, who are often engaged in the day-to-day care and treatment decisions of family members and friends.

The site is a component of the MerckEngage Health Partnership Program, which provides healthcare professionals with health support materials and tools for their patients who have been prescribed certain Merck medications. The program is designed to support the healthcare professional/healthcare consumer

relationship by providing tools and tips, online, in print and through a call center, for healthier living between office visits. The MerckEngage Health Partnership Program makes available health coaches who work one-on-one with eligible members to help them achieve their own health goals.

The Adherence Estimator

Patients often fail to reach clinical goals because they don't take medications when they are supposed to. At Merck, we remain committed to identifying the reasons why patients are not always compliant and support the development of improved evidence-based interventions that can lead to better health outcomes.

The **Adherence Estimator**, an evidence-based, patient-centered tool designed to help identify patients who may be at risk of medication nonadherence and provide the specific reason(s) they may be at risk of discontinuing therapy. The Adherence Estimator was designed to be administered shortly after the initiation of new therapy and to be completed for each new medication prescribed. It asks questions about the three key areas that affect compliance: patients' concerns about prescription medication, their perception of the need for prescription medication, and their perceived financial burden due to the cost of prescription medication. After respondents answer the questions, the tool provides easy-to-understand, personalized information that may address patient's concerns about taking medication.

Script Your Future

Merck is is a founding member of **Script Your Future**, a national campaign led by the National Consumers League (NCL) to raise awareness about the health consequences of not taking medications as directed.

SPARSH

SPARSH is a patient-support initiative for diabetes patients who are taking certain Merck medicines. The program was created in India in partnership with physicians who voiced the need for more-robust patient support. Enrolled patients receive counseling on diabetes care, complications of diabetes, and diet and exercise through telephone calls.

Healthcare Disparities and Health Literacy—U.S. Efforts

Many communities around the world, especially underserved and marginalized populations, often face multiple barriers to accessing preventive healthcare services and specialty care for chronic conditions, which can contribute to healthcare disparities. Within the United States, certain populations of healthcare consumers (HCC) are in greater need of health services—in part due to the growing diversity of the U.S. and to the disproportionate representation of certain diverse audiences in chronic illnesses, such as diabetes or hypertension. In addition, the more linguistically diverse this country becomes, the more critical the need for communication that clearly and accurately promotes HCC safety and healthcare quality. Globally, many communities are still excluded from quality healthcare as a result of poverty, lack of education, discrimination and other complex factors.

Merck believes it has an important role and responsibility in improving access to medicines, vaccines and quality healthcare worldwide. While there is still critical work to be done, good progress is being made to address health literacy and healthcare disparities globally.

Our vision is to be recognized by healthcare stakeholders as a leader in the areas of healthcare disparities and health literacy through innovative programs and resources, and through our demonstrated commitment to improving patient health outcomes.

We will accomplish these important goals through parallel strategies that focus on reducing healthcare disparities and improving health literary. In so doing, we support the overall U.S. market strategy of improving adherence and ensuring launch excellence for Merck brands.

Reducing Healthcare Disparities

This strategy is focused on educating healthcare professionals by increasing their awareness and understanding of the impact of healthcare disparities on quality of care and patient health outcomes. As an example, Merck recently launched a set of resources available to payers, integrated health systems, and

large medical groups in markets with a high concentration of healthcare disparities. The goal is to facilitate improved communications between healthcare professionals and HCCs.

Merck also supports consumer efforts to reduce healthcare disparities by leveraging cultural competence in our communications and marketing outreach materials. Based on input from customers and the field, a recent photo shoot added many additional diverse images, including multiethnic and multigenerational individuals, as well as more realistic urban settings and additional diversity within specific cultures. Finally, we have been successful in partnering with healthcare professionals, and working toward reducing healthcare disparities by creating innovative and culturally relevant disease-related resources that meet the health communications needs of customers.

Improving Health Literacy

At Merck, we are working to ensure that communications—how we speak to HCCs and the images we use to depict them—resonate in a culturally respectful and clear way, using appropriate language whenever possible and speaking in the active voice. These communications conform to established health literacy guidelines that have been created specifically for HCCs and for the healthcare professionals who care for them.

Finally, there are ongoing plans examining how we can impact health literacy earlier in the clinical-development process. In addition, we are assessing how health literacy impacts the overall healthcare consumer adherence to medications. These projects involve partnerships across the organization, including clinical research, the office of the chief medical officer and marketing.

Health Literacy—Efforts in Europe

Health literacy is the capacity to make sound health decisions in the context of everyday life—at home, in communities, at the workplace, in the healthcare system, in the marketplace and in the political arena.

Health literacy empowers people to make healthy choices and play a more active role in their health.

Merck has been committed to improve health literacy for more than 10 years to help increase access to healthcare through far-reaching policies, programs and partnerships across all markets. We partner with a wide range of stakeholders and support projects that empower people to make informed health decisions.

Throughout 2011, several Merck/MSD subsidiaries across Europe initiated projects in the area of health literacy:

At the EU level, the University of Maastricht organized the European Conference on Health Literacy with the support of MSD (Europe). The European Health Literacy Commissioner, John Dalli, opened the conference with a keynote.

The European Health Literacy Survey (HLS) project received two awards; one for the Societal Impact of the HLS-EU project—the so-called Crebolder Award from CAPHRI, a research school on public health and primary care; and another from the Dutch health organization Huis voor Zorg.

Together with the University of Patients (Autonomous University of Barcelona), MSD Spain organized an International Health Literacy Seminar that brought together some 56 multidisciplinary attendees, including journalists and health authorities. This workshop was part of a long-term project whose objective is to emphasize the role of informed decision-making and health communications in healthcare.

Based on the initiative of MSD Switzerland, a broad stakeholder alliance with health insurers, doctors, pharmacists and patient groups launched a pilot to improve health outcomes of asthma patients through better health literacy. The pilot is linked to a scientific study and is financed by the second largest health insurer of Switzerland.

With support from Merck, the Serbian Association for Childhood Asthma undertook the Serbian Childhood Asthma Network project. The project is based on the experiences of the **Merck Childhood Asthma Network**. In response to an initial survey that indicated a lack of health literacy, the project provided education to teachers, parents, kids and school physicians about childhood asthma. After implementation in the 28 elementary

schools in Belgrade, the Ministry of Health of the Republic of Serbia accepted the network as a model for national programs for literacy regarding childhood asthma.

Merck Medicus™ is an online, promotion-free guide to medical information for U.S. medical professionals.. Resources include a library of clinical references and guidelines, professional development tools, presentation materials and patient resources.

The third-party resources offered on Merck Medicus allow medical professionals to access the latest medical news, conference and congress reports, and practice guidelines. A digital-image library, including 2D and 3D resources, adds to the offerings. Leading medical publishers such as The Lancet and Harrison's are featured on the site, and content is organized by medical specialty and is easily searchable. All Medicus resources and tools can be accessed from any mobile device and smartphone.

Univadis® is an innovative online medical-information resource from MSD for healthcare professionals worldwide. This online resource provides high-quality, relevant and trusted medical information essential for healthcare practice. With an easy-to-use interface, the Univadis site features breaking medical news, accredited education courses and cutting-edge tools tailored to each medical specialty and clinician need.

One of the most trusted sources of medical knowledge worldwide, Univadis provides content that is independently developed by top scientific leaders and is provided in local languages free of charge to medical professionals.

Through Univadis, healthcare professionals have exclusive access to more than 400 peer-reviewed online education courses. We partner with some of the world's leading medical publishers, including **BMJ Learning** and ***The Lancet***, to provide independent and up-to-date information.

COMMUNITY INVESTMENT

We recognize that we cannot address complex public health challenges on our own; therefore, we engage in community investment to address the barriers to access where we believe we can make the strongest contribution.

Despite Merck's efforts to develop and implement effective philanthropic and business strategies to help remove barriers to access, challenges remain due to the complex and multifaceted nature of the problem. To truly address—and, ultimately, solve—the issues of access in developing and middle-income markets, the international community must pool its resources and expertise to strengthen healthcare infrastructure, ensure adequate financing for health, and help to build local healthcare capacity through training and support. Even in developed countries, challenges remain to reach groups of underserved populations.

Merck recognizes that building the capacity of healthcare professionals is a major factor in addressing global health challenges.

Earth Institute's Millennium Villages Community Health Worker Training Program

In 2009, with support from The Merck Company Foundation, the Earth Institute at Columbia University launched a community health worker training program to strengthen community health services for more than 400,000 people in 10 African countries, as part of the **Millennium Villages Project (MVP)**. The initiative aims to advance the development of a professional cadre of community health workers to fill a critical gap in the delivery of primary healthcare for rural communities throughout Africa.

The program will ensure that participating community health workers are skilled, well trained, properly remunerated, regularly supervised and fully integrated into their countries' healthcare systems. To date, MVP has trained approximately 932 community health workers across 14 Millennium Villages. The Merck Company Foundation renewed its support over three years (2011–2013) for this MVP program to help scale up primary-care systems across Africa.

BroadReach Institute for Training and Education's Management and Leadership Academy

With support from The Merck Company Foundation, the **BroadReach Institute for Training and Education (BRITE)** has launched its Management and Leadership Academy (MLA) program in Zambia, which teaches critical management and leadership skills to healthcare professionals to build and strengthen the capacity of their local health systems. This program aims to equip healthcare workers with the knowledge and skills to lead, own and, ultimately, transform the delivery of healthcare in their own countries. MLA teaches "results-based" management, focusing on solving current challenges by combining on-site workshops with case studies and extensive mentoring of program participants.

BRITE is also working with Abt Associates in implementing the MLA program and is receiving additional support under the USAID-funded Zambia Integrated Systems Strengthening Program (ZISSP). BRITE and ZISSP are working in close partnership with the Ministry of Health in Zambia to support the ministry's ongoing efforts to develop management and leadership capacity at different levels of the health system. Through the MLA program, BRITE and its partners aim to conduct training for healthcare professionals in all nine provinces, across 27 target districts, of Zambia. The first workshop in the MLA training series was conducted among 12 cohorts (6 provincial and 6 district cohorts). By the end of 2011, approximately 250 healthcare workers from various levels of the health system had been trained through these workshops in Zambia.

Merck Vaccine Network-Africa

As part of our commitment to the GAVI Alliance, Merck initiated the **Merck Vaccine Network-Africa (MVN-A)**, a multiyear philanthropic initiative supported by The Merck Company Foundation to help strengthen the capacity of Expanded Program on Immunization (EPI) health workers in sub-Saharan Africa. Formally endorsed by the GAVI Alliance in 2003, the MVN-A supports collaborative partnerships in the development and implementation of sustainable EPI management-training programs in Kenya, Uganda, Mali and Zambia. MVN-A also supports the achievement of the UN Millennium Development Goals, including reducing by two-thirds the mortality rate among children under the age of five by 2012. MVN-A training programs in Kenya, Mali, Uganda and Zambia trained more than 1,600 EPI health workers across all four countries.

Pneumococcal Disease Prevention and Capacity Building

Over the course of three-year, phased programs in Nicaragua and Honduras, Merck committed to donate 1.7 million doses of PNEUMOVAX® 23 (Pneumococcal Vaccine Polyvalent) and provide charitable grants amounting to $1 million to Project HOPE to support efforts to vaccinate vulnerable populations against pneumococcal infections, a major cause of pneumonia.

In partnership with the Nicaraguan and Honduran ministries of health, and utilizing grant funding from Merck, Project HOPE is improving the capacity of each national immunization program by training health workers to plan and implement successful vaccination campaigns. Project HOPE is also providing vital equipment and supplies to each ministry of health, including refrigerators required for the proper storage of vaccines and computers to help monitor and evaluate immunization activities as the initiatives progress in both countries.

As of 2011, the program has trained 5,046 health workers in Nicaragua and 823 in Honduras and has administered more than 96 percent of the initial donated doses of PNEUMOVAX to patients in both countries The project also fostered cross-border sharing of best practices and lessons learned between the National Immunization Program counterparts in each country.

Catholic Medical Mission Board—Global Health System Strengthening Program

In late 2011, Merck provided $100,000 in funding to the Catholic Medical Mission Board (CMMB) for their Global Health Systems Strengthening program. The goal of the five-year [2012–2016] program is to increase the demonstrated organizational capacity of 25 of CMMB's developing country partners to manage their pharmaceuticals and supplies in a cost-effective and sustainable manner. The program will contribute directly to the WHO's stated health system strengthening (HSS) goal of improving norms, standards, procurement, policies and quality standards for medical products.

United Nations Foundation—Measles Initiative

Since 2001, the **Measles Initiative** has contributed to saving lives by supporting 80 countries in delivering more than 1 billion doses of measles vaccine and helping to raise measles vaccination coverage to 85 percent globally. In 2008, Merck provided a $2 million grant to the United Nations Foundation to support the Measles Initiative and advance disease surveillance efforts in Africa.

In 2010, we continued our support with an additional $250,000 to support measles immunization and disease surveillance activities in Nigeria during early 2011. More than 28 million children were vaccinated during the measles campaigns in Nigeria, achieving a national coverage level of 99 percent of the target population. Merck's support enabled the timely notification and investigation of suspected measles cases and outbreaks in the country. Following the immunization campaigns and investigation of outbreaks, the scale of measles outbreaks decreased significantly—by 75 percent.

In 2011, Merck provided $300,000 to strengthen measles surveillance and routine immunization efforts in India, thereby helping to support campaigns in 2012 that aim to vaccinate more than 122 million children.

In addition, many of our partnerships focused on HIV/AIDS are also involved in healthcare capacity building. **Learn more**.

PUBLIC-PRIVATE PARTNERSHIPS

A key element of Merck's access strategy is promoting and participating in public-private partnerships (PPPs).

We work with local communities, governments, nongovernmental organizations (NGOs), multilateral organizations and corporations to address specific health and development challenges that go well beyond what Merck can directly accomplish alone.

Merck has decades of experience in developing PPPs in various areas. In 1987, with many partners, we launched the **Merck MECTIZAN® (ivermectin) Donation Program (MDP)**, the first large-scale, comprehensive global health initiative of its kind. The MDP provides the drug MECTIZAN to treat onchocerciasis (river blindness) in countries where the disease is endemic and to prevent lymphatic filariasis in African countries where it coexists with onchocerciasis. Today, the MDP is recognized as one of the world's most successful global healthcare collaborations, and one that continues to have significant positive impact on tens of millions of people.

Merck does not believe, however, that donating medicines and vaccines alone is a sustainable long-term solution to the global challenge of access to medicines. But we recognize that millions of patients need medicines now and cannot wait for better solutions that would make them more widely available. For that reason, Merck remains committed to donating our products through the **Merck Medical Outreach Program**, as we have done for more than 50 years, and through U.S.-based **Patient Assistance Program (PAP)** .

Merck also provides our products free of charge to researchers for responsible clinical initiatives that will help improve the knowledge base about our products and global health in general. For example, in 2009 Merck completed clinical trials of the PATH Rotavirus Vaccine Program to study the safety and efficacy of ROTATEQ®(Rotavirus Vaccine, Live, Oral, Pentavalent) in Bangladesh, Vietnam, Ghana, Kenya and Mali. Trials at all sites in Africa and Asia involved more than 7,500 infants and were published in the August 2010 issue of *The Lancet*. The results of these studies support expanded WHO recommendations to promote global use of ROTATEQ.

Merck has applied our experience in global health partnerships to programs around the world that are helping to prevent and treat HIV/AIDS, other chronic conditions and vaccine-preventable illnesses. While many involve financial or in-kind support, Merck also seeks to leverage the expertise and the skills of our employees in order to contribute in additional meaningful ways.

For example, Merck is actively pursuing programs that we have and will continue to demonstrate the feasibility of large-scale immunization and the positive impacts of vaccine introduction in developing countries. Learn more about our work in the area of **vaccines**.

We work closely with our partners on the ground to formulate specific goals and metrics for the partnerships in which we are involved. For example, the **African Comprehensive HIV/AIDS Partnerships (ACHAP)** sets targets that are reviewed annually by the ACHAP Board, on which two Merck representatives sit/

We also have rigorous governance and oversight mechanisms in place for all of our programs and partnerships. And we require all of our grantees to submit regular (usually annual) reports outlining how Merck funds or medicines were used and what was accomplished. For some of our larger initiatives, including the Merck MECTIZAN® (ivermectin) Donation Program and ACHAP, we have commissioned third-party evaluations on program effectiveness.

Learn more about our public-private partnerships in **HIV/AIDS** and **Women's Health**.

MERCK CHILDHOOD ASTHMA NETWORK

The **Merck Childhood Asthma Network, Inc. (MCAN)**, a nonprofit 501(c)(3) organization established in 2005, is the only private foundation solely focused on addressing the complex and growing problem of childhood asthma in the United States.

Funded by The Merck Company Foundation, MCAN's mission is to enhance the quality of life for children with asthma and their families, and to reduce the burden of the disease on them and society.

Led by Floyd Malveaux, M.D., Ph.D., a nationally recognized expert in asthma and allergic diseases and Emeritus Dean of the College of Medicine and Professor of Microbiology and Medicine at Howard University, MCAN is a respected authority, effective catalyst and influential advocate for children with asthma. Through research, community programs and partnerships, MCAN is working to:

- Improve access to, and quality of, asthma healthcare for children, especially the vulnerable and medically underserved
- Advocate for policies that expedite implementation, dissemination and sustainability of evidence-based asthma care
- Increase awareness and knowledge of asthma and quality asthma care

MCAN funds programs that involve tailored asthma case management and the reduction of environmental risk factors/triggers in the home. These programs are implemented in several different settings: community health centers, school systems, community-based organizations, public housing and primary care centers.

MCAN advocates for policies that support science-based asthma care by working with partners such as the George Washington University School of Public Health and Health Services, the U.S. Environmental Protection Agency, the Centers for Disease Control and Prevention (CDC), and the National Institutes of Health (NIH).

The Merck Company Foundation has committed $41 million to support MCAN over 10 years (2005–2014), The investment in MCAN for 2010 was $4.4 million and in 2011 was $5.4 million.

PERFORMANCE & COMMITMENTS

SUMMARY OUTCOMES FROM MCAN CROSS-SITE EVALUATION OF PHASE 1 PROGRAMS, 2005–2009

	Baseline Mean (SD)	12-month Follow-Up Mean (SD)
Caregiver confidence: Caregiver agreement with "I have control over child's asthma" (1: strongly agree to 4: strongly disagree) (Baseline N = 699, 12-Month N = 716)	2.15 (0.76)	1.61 (0.56)
Number of days in the last 14 days child used quick-relief medication for asthma, wheezing, tightness in chest, or cough (Baseline N = 659, 12-Month N = 627)	4.03 (4.53)	2.12 (3.63)
Number of days in the last 14 days child experienced wheezing, tightness in chest, or cough (Baseline N = 719, 12-Month N = 720)	4.14 (4.41)	1.77 (3.15)
Number of nights in the last 14 nights child woke up because of asthma, wheezing, tightness in chest, or cough (Baseline N = 719, 12-Month N = 722)	2.94 (4.08)	1.29 (2.87)
Number of days in the last 14 days child slowed down/stopped activities because of asthma, wheezing, tightness in chest, or cough (Baseline N = 717, 12-Month N = 719)	2.49 (3.89)	0.85 (2.31)
Number of days in the past 12 months child missed school due to asthma (Baseline N = 628, 12-Month N = 615)	7.31 (9.41)	3.16 (6.80)
Number of times in the last 12 months child was treated in emergency room or ER for asthma (Baseline N = 723, 12-Month N = 720)	1.90 (2.96)	0.80 (1.80)
Number of times in the past 12 months child had to stay overnight in the hospital for asthma (Baseline N = 723, 12-Month N = 720)	0.48 (1.23)	0.28 (1.18)
Appropriate controller medication use (Baseline N = 724, 12-Month N = 724)	52.76% (50.0%)	56.91% (49.6%)
A doctor or other healthcare provider has given child or child's parent/caregiver/guardian an asthma management plan (Baseline N = 713, 12-Month N = 712)	25.8% (43.7%)	80.9% (39.3%)

Note: All comparisons between baseline and follow-up were statistically significant at a p-value 0.05 or less
Source: Mansfield, C., Viswanathan, M., Woodell, C., Nourani, V., Ohadike, Y. U., Lesch, J. K., … West, C. (2011). Outcomes from a cross-site evaluation of a comprehensive pediatric asthma initiative incorporating translation of evidence-based interventions. *Health Promotion Practice*, 12 (Suppl. 1), 34S-51S.

INITIATIVES

MCAN Phase One Program Sites (2005–2009)

In December 2005, the Merck Childhood Asthma Network (MCAN) awarded $10 million in grants to five innovative childhood asthma programs in cities experiencing high prevalence rates of childhood asthma.

The four-year programs took place in Chicago, Los Angeles, New York City, Philadelphia, and San Juan, Puerto Rico. An independent research group conducted a cross-site evaluation and found that, overall, children and their caretakers who participated in these programs experienced better health outcomes and better access to quality care. The findings were published in a supplement to **Health Promotion Practice**.

MCAN Care Coordination Program Sites (2010–2014)

Through the Care Coordination grant portfolio, MCAN is seeking to demonstrate the feasibility and effectiveness of implementing and sustaining care-coordination models developed during MCAN Phase One in communities with significant childhood asthma morbidity and/or disparities in outcomes.

These are the current program sites:

Los Angeles Unified School District, "Yes We Can" Children's Asthma Program
The program uses a care-coordination and education model that extends beyond the immediate school clinic to include system changes among health, educational and community settings. The program triages students and families into the appropriate level of intervention, improves the coordination of care among schools, clinics and community providers, and focuses on measuring symptom reduction and school days missed.

Respiratory Health Association of Metropolitan Chicago, "Addressing Asthma in Englewood"
The program centers on a community educator model, linking children with asthma to appropriate services, education programs in schools, community groups and local agencies. A home-visit case-management program is also provided to enhance asthma education and to identify and mitigate asthma triggers.

RAND Corporation, La Red de Asma Infantil de Merck de Puerto Rico
The program carries out evidence-based interventions as part of an asthma care coordination program across home, healthcare and community settings. Implemented in the Nemesio Canales Housing Project in San Juan, Puerto Rico, La Red promotes asthma-friendly communities throughout the island of Puerto Rico and improves access to quality asthma healthcare for this highly vulnerable and underserved community.

Children's Hospital of Philadelphia, Asthma Health Care Navigator Program
In this program, asthma healthcare navigators located within four primary care centers, operated by the hospital, work with primary care providers as an integral member of the families' asthma care teams. They assist families in identifying and reducing asthma triggers in the home, and provide self-management education and other support and resources for families of high-risk children with asthma.

Care Coordination program sites are also participating in a cross-site evaluation to assess outcome and process measures focused on care coordination and clinical outcomes. Specific process and outcome measures are being developed.

Community Healthcare for Asthma Management and the Prevention of Symptoms (CHAMPS)
CHAMPS is an innovative translational research and community-based clinical partnership, funded by MCAN and led by the George Washington University (GWU) School of Public Health and Health Services. Additional partners include Rho, Inc., and the RCHN Community Health Foundation. The project is designed to demonstrate how tailored, evidence-based asthma management programs that have been proven efficacious in controlled trials, can be implemented in Federally Qualified Community Health Centers, where many impoverished children and families receive health care. Community health centers participating in the CHAMPS program include: El Rio Community Health Center (Tucson, Arizona); Cherry Street Health Services

(Grand Rapids, Michigan); and Rincon Health Center (Rincon, Puerto Rico).

Head-Off Environmental Asthma in Louisiana (HEAL), Phase II
With support from MCAN, HEAL, Phase II builds upon the lessons learned from the Head-off Environmental Asthma in Louisiana (HEAL) project, a post-Katrina research initiative that studied the effects of mold and other indoor allergens on children with moderate to severe asthma. HEAL identified the challenges and effectiveness of implementing a multi-faceted intervention of asthma case management and environmental mitigation designed to help improve the health outcomes of children with asthma.

In HEAL, Phase II, the Xavier University of Louisiana Center for Minority Health & Health Disparities Research and Education, Daughters of Charity Services of New Orleans, and the Children's Health Fund are the on-the-ground partners working to disseminate and implement the multi-faceted intervention in existing healthcare systems. They provide individualized counseling through certified asthma educators who make home visits to children with poorly controlled asthma. The asthma educators will provide tailored counseling for children with asthma, ages 2-18, and their families, to improve asthma management, avoid exposure to asthma triggers, and reduce exacerbation of symptoms.

Comprehensive Asthma Project (CAP)
The Comprehensive Asthma Project (CAP) is a current initiative between MCAN and the American Academy of Pediatrics (AAP) to improve the quality of asthma care for children by pediatricians throughout the United States. CAP provides support to AAP chapters and member practices, to disseminate and facilitate implementation of the asthma guidelines established by the National Asthma Education and Prevention Program (NAEPP) of the National Heart, Lung, and Blood Institute (NHLBI) and to reduce disparities in asthma outcomes in practices that serve impoverished and medically underserved patients/caregivers.

National Ambulatory Medical Care Survey (NAMCS)
The National Ambulatory Medical Care Survey (NAMCS) is a national survey of physicians, to better understand how care is being delivered in providers' offices. MCAN, the National Institutes of Health (NHLBI, NICHD, NIEHS, NIAID), the Centers for Disease Control and Prevention (NCEH, NIOSH, NCHS), the Environmental Protection Agency and the Agency for Healthcare Research and Quality are providing support and expertise to develop specific questions for the 2012 NAMCS on the NAEPP asthma guidelines and their use.

This will allow evaluation of guideline implementation from the healthcare provider's perspective, and help in identifying barriers to the uptake of critical elements of guideline-based management of asthma. These findings can inform ongoing strategies to increase effective implementation of the NIH Guidelines.

PUBLIC POLICY

MCAN is educating stakeholders and policy makers on approaches that not only improve access to quality asthma care, but also can be cost-effective and cost-saving.

Changing pO_2licy: The Elements for Improving Childhood Asthma Outcomes
Commissioned by MCAN, in collaboration with the RCHN Community Health Foundation (CHF), this report is the result of a landmark study by health policy researchers at George Washington University (GWU) to determine why children in the U.S. are not benefiting more from science-based asthma treatment and management, and what policy reforms are essential to improve asthma outcomes.

GWU identified the following essential elements that are key to improving asthma outcomes:

- Stable and continuous health insurance
- High quality clinical and case management
- Continuous information exchange and progress monitoring
- Asthma trigger reduction in homes and communities
- Research to learn more about what works

The Affordable Care Act, Medical Homes, and Childhood Asthma: A Key Opportunity for Progress
This policy brief, authored by GWU, and supported by MCAN and RCHN CHF, focuses on how the medical-home model supports comprehensive, patient-centered care by fostering partnerships between patients and their providers, including primary care doctors, pediatricians, specialists and emergency service providers.

Addressing the Challenges of Reporting on Childhood Asthma in a Changing Health Care System: Building Better Evidence for High Performance
In this brief, also funded by MCAN and RCHN CHF, researchers at The George Washington University Department of Health Policy developed recommendations for standardizing surveillance measures and expanding existing reporting functions and systems to improve the collection of on children with asthma.

NIH Asthma Outcomes Workshop
The NIH Asthma Outcomes Workshop was funded by The National Heart, Lung, and Blood Institute (NHLBI), National Institute of Allergy and Infectious Diseases (NIAID), National Institute of Child Health and Human Development (NICHD), National Institute of Environmental Health Sciences (NIEHS), National Institute on Minority Health and Health Disparities (NIMHD), Agency for Healthcare Research and Quality (AHRQ), MCAN and the Robert Wood Johnson Foundation (RWJF), and took place on March 15-16, 2010, in Bethesda, Maryland. The purpose of the workshop was to establish and promote a set of standard definitions and recommended metrics for key variables in asthma-related clinical trials and translational research.

Participants included more than 130 leaders in NIH-sponsored asthma clinical research, representatives of government agencies and members of communities who rely on clinical research findings, such as developers of clinical practice guidelines, healthcare providers, insurance providers, pharmaceutical companies and community organizations. The final recommendations from the workshop were published as a supplement to the March 2012 issue of the Journal of Allergy and Clinical Immunology, and federal agencies will consider implementing the published recommendations in the coming months.

ALLIANCE TO REDUCE DISPARITIES IN DIABETES

Healthcare disparities refer to differences or inequities in access to, and outcomes of, health services.

In the United States, disparities for many chronic health conditions, including diabetes, are a growing national concern. The U.S. Centers for Disease Control and Prevention estimates that nearly 25.8 million people—8.3 percent of the U.S. population—are affected by diabetes. Type 2 diabetes accounts for 90 to 95 percent of all diagnosed cases.

To address the growing problem of healthcare disparities related to type 2 diabetes in the United States among low-income and underserved adult populations, The Merck Company Foundation launched **The Alliance to Reduce Disparities in Diabetes (Alliance)** in 2009 with a commitment of $15 million through 2013.

The Alliance is working to minimize diabetes disparities and enhance the quality of diabetes care by improving prevention and management services. The Alliance is collaborating with national, regional and community partners to develop and implement comprehensive, evidence-based diabetes programs that:

- Apply proven, community-based and collaborative approaches to address healthcare disparities related to type 2 diabetes among low-income and underserved adult populations
- Enhance patient and healthcare provider communication, mobilize community partners and assist healthcare organizations in decreasing disparities in diabetes care
- Disseminate important findings to aid in the development of comprehensive prevention and management programs to help improve the quality of healthcare for adults who have or are at risk for diabetes
- Increase awareness of policy makers at all levels about changes that can help to reduce healthcare disparities in diabetes
- Promote collaboration and information exchanges to strengthen the efforts of interested stakeholders around the country that share the vision and goals of the Alliance

Through grants to five organizations, The Merck Company Foundation is supporting multifaceted, community-based programs that address the key factors that can improve health outcomes for people living with diabetes. The five grantee communities are: Camden, New Jersey; Chicago, Illinois; Dallas, Texas; Memphis, Tennessee; and Wind River Reservation, Wyoming. The University of Michigan's Center for Managing Chronic Disease serves as the Alliance National Program Office.

Alliance programs focus on integrating three core components:

- **Patients:** Patients who are better educated and empowered may become more engaged in their healthcare overall; they may become better at managing their conditions themselves by adopting behaviors that help prevent health problems and communicating effectively with physicians and other clinicians
- **Clinicians:** Clinicians who are more skilled in communicating with diverse patient groups—and are aware of cultural beliefs—are more effective in providing care and educating their patients
- **System:** Healthcare organizations that implement and support clinical systems, policies or practices related to effective disease management can help to reduce disparities in diabetes care

Alliance Program Sites

Camden Coalition of Healthcare Providers (Camden, New Jersey): The Camden Citywide Diabetes Collaborative aims to better coordinate and improve the quality of comprehensive primary care services for city residents with diabetes.

University of Chicago (Chicago, Illinois): The University of Chicago program focuses on redesigning and improving the quality of diabetes management and care provided at community health centers on the South Side of Chicago.

Baylor Health Care System, Office of Health Equity (Dallas, Texas): The Diabetes Equity Project focuses on helping

physicians develop strategies that promote effective care and management for low-income, uninsured and underserved people with diabetes in Dallas.

Healthy Memphis Common Table (Memphis, Tennessee): The Diabetes for Life program promotes community outreach and diabetes self-management through local churches in Memphis.

Wind River Reservation (Fort Washakie, Wyoming): An effort led by the Eastern Shoshone Tribe and its collaborating partners seeks to improve access to diabetes care and management among the Eastern Shoshone and Northern Arapaho Tribes of the Wind River Reservation.

PERFORMANCE & COMMITMENTS

Cross-Site Alliance Program Evaluation

The Foundation is working with **RTI International** to conduct a five-year (2009–2013), cross-site evaluation of the Alliance and its programs. Initial results from the evaluation provide an overview of provider enrollment and participation metrics as well as baseline patient self-reported outcome measures.

In 2011, 45 clinics or practices participated in at least two of the three areas of intervention (i.e., patient, provider, and system). Cumulatively, from 2009 to 2011, 166 individual physicians have been actively engaged in program implementation (e.g., recruiting patients with type 2 diabetes, identifying and implementing systems change in the practice setting). In addition, Alliance sites have served a diverse patient population through their programs. From 2009 to 2011, across the sites, 42 percent of patients were Hispanic or Latino, 36 percent are African American, 9 percent were Native American, 7 percent were white, 2 percent were Asian, and 4 percent were of another racial or ethnic background.

In 2012, clinical outcome metrics will be available, including those for hemoglobin A1c, blood pressure, and cholesterol. Note that the data below are not site-specific, but are aggregated across the five sites, and are coming from an independent evaluation.

PATIENT AND PROVIDER PARTICIPATION	2010	2011
Number of adults with type 2 diabetes enrolled in DSME[1]	1,008	1,981
Number of providers who received cultural awareness training[2]	39	72
Patient Self-reported Outcomes—Baseline	Average Score	
Diabetes competence[3]	5.1	NA
Diabetes self-care behaviors [4]		
General diet	3.7	NA
Diabetes-specific diet	3.7	NA
Exercise	2.9	NA
Blood-glucose testing	3.9	NA
Foot care	3.8	NA
Quality-of-life measures		
Physical functioning[5]	42.3	NA
Mental functioning[6]	45.3	NA

[1] DSME: Diabetes self-management education. DSME commonly addresses enhancing self-care behaviors (such as nutrition, exercise, and blood glucose monitoring) and informed decision-making in order to improve clinical outcomes and quality of life.
[2] Cultural awareness training refers to the process by which better patient care is delivered. It helps clinicians become better communicators and makes them more aware of cultural differences.
[3] Weighted average of responses to four competence questions rated on a scale from 1 to 7, where higher ratings reflected increased feelings of competence about engaging in diabetes self-management. The baseline score here demonstrates slightly above average competence.
[4] Weighted average shown for each behavior. Self-care behaviors are scored on a scale from 0 to 7 reflecting on how many of the past 7 days a behavior was performed. Higher numbers reflect more days on which the behavior is performed. The scores here demonstrate participants, that on average, engaged in these behaviors between 3 or 4 days a week at baseline.
[5] Weighted average shown for baseline self-reported physical functioning (e.g., physical ability or limitations, bodily pain), where higher scores reflect better physical functioning. Population norm: 50.
[6] Weighted average shown for baseline self-reported mental functioning (e.g., feelings of depression, anxiety, calm), where higher scores reflect better mental functioning. Population norm: 50.

C-MAP

The first recorded case of HIV in China occurred in 1985.

Today, an estimated 780,000 Chinese citizens are living with HIV, according to the *Joint Assessment of HIV/AIDS Prevention, Treatment and Care in China*, published by China's State Council AIDS Working Committee Office and the UN Theme Group on HIV/AIDS in China.

The China-MSD HIV/AIDS Partnership, or C-MAP is a program led by two conational directors and has project offices in Beijing, and in Sichuan Province's Liangshan Prefecture. The program is focused on six goals:

- Raising awareness and reducing discrimination among target populations through training and education
- Deploying comprehensive, integrated risk-reduction approaches to reduce HIV transmission among at-risk populations
- Establishing a service network to provide continuous treatment, care and support to people living with HIV/AIDS
- Providing support to orphans and families affected by HIV to alleviate negative social and economic consequences of the disease
- Building capacity of healthcare workers and organizations
- Strengthening HIV surveillance, monitoring and evaluation systems, as well as data management and analysis, to track program implementation, assess program outcomes, and identify and apply best practices

C-MAP collaborates with approximately 11,500 people working in 1,600 implementing organizations, including departments within the Government of China, medical and health institutions, civil society, international organizations, grassroots healthcare workers and beneficiary groups. The Government of China, through its Ministry of Health, is providing staff, facilities and equipment.

PERFORMANCE & COMMITMENTS

When the partnership was launched in 2005, C-MAP covered three counties in Liangshan Prefecture in Sichuan province. In 2008, C-MAP expanded to cover 62 counties/districts, targeting 21 million people out of a total population of 87.5 million in Sichuan province.

Key Indicators & Achievements

Strategy 1—Mass Education
Through a variety of HIV educational programs, nearly 8 million people received HIV information directly, and 14 million people were reached through a mass-media educational program. The target populations for HIV education included local government officials, migrant workers, Yi ethnic community members, and middle school students.

Strategy 2—Intervention
To reduce the infection rate among high-risk populations, more than 262,000 at-risk individuals, including injection-drug users, female sex workers, men who have sex with men, and STD clinic patients have undergone targeted HIV-prevention interventions to encourage prevention, HIV testing and counseling, and treatment.

Strategy 3—Testing and Treatment for Provider-Initiated HIV Testing and Counseling Initiatives
To increase the diagnosis of HIV/AIDS and to provide timely counseling and referral services, C-MAP supported the efforts of Liangshan's Center for Disease Control and Prevention (CDC) to establish 214 provider-initiated HIV-testing and counseling (PITC) sites in 17 counties, along with 186 testing and counseling sites for pregnant women in nine counties for the prevention of mother-to-child transmission (PMTCT) of HIV. Nearly 631,000 people, including more than 81,000 pregnant women, have received HIV-testing and counseling services through PITC and PMTCT sites.

Strategy 4—Care and Support
C-MAP worked with county CDCs to provide support and care to 4,181 people living with AIDS (PLWHAs), including orphans affected by the disease, and helped 23,500 HIV/AIDS patients and their families join the New Rural Cooperative Medical Scheme conducted by the Chinese government.

Strategy 5—Capacity Building
To improve healthcare capacity and the quality of care provided to people living with HIV/AIDS in China, C-MAP has trained more than 50,000 of that country's healthcare workers. Moreover, 599 public health workers have been hired to supplement the staff shortage at local health facilities.

Strategy 6—Surveillance, Monitoring & Evaluation
To better understand the HIV epidemic and the behavior of targeted populations in Sichuan Province, C-MAP worked with province/prefecture CDCs and Sichuan University to conduct baseline surveys and HIV surveillance of nearly 187,000 participants from the targeted populations. In addition, with the support of the Sichuan Health Authority, C-MAP worked with the Liangshan CDC to conduct a mass HIV screening in the most critical county of Liangshan Prefecture, through which more than 133,000 county citizens were tested for HIV.

Achievements

The first large-scale, international, public-private partnership focused on HIV/AIDS prevention and control in China, C-MAP received the China Charity Award—Most Influential Charity Program from China's Ministry of Civil Affairs in 2011.

Through widespread HIV screening and comprehensive surveillance efforts, C-MAP helped to highlight the HIV epidemic in Liangshan, the attention of the central and provincial governments, and contributed to raising awareness among officials about the importance of HIV/AIDS prevention and control in Liangshan.

C-MAP has developed a series of successful, replicable and effective models for HIV prevention and control in ethnic-minority areas, such as Yi ethnic opera performances for HIV education; life-skills education among middle school students; prevention-education programs for rural women; methadone replacement/treatment branch sites at the township level; PMTCT programs; PITC, and rapid HIV testing.

C-MAP has supported and facilitated large-scale HIV testing, intensive follow-up for patients at the community level, and the establishment of comprehensive patient referral and management systems. These efforts have contributed to substantial achievements in providing treatment for people living with HIV/AIDS. For example, the number of patients on antiretroviral treatment (ART) in China increased from 76 in 2007 to 3,924 by end of 2011.

C-MAP SUMMARY	2007	2008	2009	2010	2011
Investment by The Merck Company Foundation (US$ millions)	4.0	3.0	4.5	7.0	7.0
Education					
Middle school students who have received HIV education	0	553,511	1,066,328	1,802,100	871,736
Teachers trained to provide HIV/AIDS education to middle school students	0	782	173	353	1,442
Government leaders and policy makers who have received HIV information and education	0	11,800	5,604	40	300
Yi ethnic community members who have received HIV information and education	50,000	115,000	60,747	57,353	262,000
Migrant workers who have received HIV information and education	0	1,194,927	2,831,548	152,050	1,541,681
Intervention					
At-risk individuals who have received HIV interventions	0	45,372	89,215	89,389	111,006
Treatment and Testing					
People who have received HIV testing and counseling (PITC Initiative)	8,319	70,779	131,489	283,036	202,234
Newly identified HIV/AIDS patients for whom personal epidemic profiles were completed	0	1,060	3,804	4,508	4,545
Newly identified HIV-positive patients who have received CD4 testing	0	631	3,169	10,640	3,996
Pregnant women tested for HIV (PMTCT Initiative)	2,223	15,102	16,864	47,043	51,230
Diagnosed AIDS patients who are receiving ART	0	147	290	1,447	3,526
Care and Support					
Care activities held at the county level	0	46	89	1,034	4,181
Capacity-building Initiatives					
Healthcare workers/physicians trained (includes lab workers)	1,256	8,261	13,024	10,909	650
Staff at implementing organizations that have received project management training	316	493	394	975	837
Monitoring and Evaluation					
Target population that were included in baseline survey & comprehensive surveillance	3,834	48,119	6,655	28,023	77,695
People that received HIV mass screening in target counties	0	31,111	46,454	0	0

ACHAP

The Merck Company Foundation/Merck, and the Bill & Melinda Gates Foundation established the African Comprehensive HIV/AIDS Partnerships (ACHAP) to support Botswana, a country disproportionately affected by HIV/AIDS.

ACHAP's comprehensive approach includes HIV/AIDS prevention, treatment, care and support, and impact mitigation. At its inception, The Merck Company Foundation and the Gates Foundation committed $106.5 million to the partnership, and Merck agreed to donate its antiretroviral (ARV) medicines—STOCRIN® (efavirenz) and CRIXIVAN® (indinavir sulfate)—to Botswana's national antiretroviral (ARV) treatment program for the partnership's duration. In November 2008, Merck expanded its donations to include ATRIPLA® (efavirenz 600 mg/emtricitabine 200 mg, tenofovir disoproxil fumarate 300 mg) and ISENTRESS® (raltegravir).

In 2010, The Merck Company Foundation committed an additional $30 million over five years (2010–2014) to support Phase II of ACHAP. This additional funding will enable ACHAP to build on its progress by:

- Supporting the scale-up of safe male circumcision among HIV negative males aged 15–29 years, to reach 27.2 percent (127,000) of national target by 2014
- Positioning ACHAP as a successful country-led public-private partnership model now and in the future, through focused and sustained stakeholder relations and engagement
- Systematically transitioning the support of the antiretroviral (ART) treatment program to the government of Botswana and enabling the national program to sustain quality and maintain treatment coverage
- Strengthening the National TB Programme in order to improve access to and utilization of integrated TB and HIV services on a national scale by 2014
- Improving the generation, utilization and sharing of strategic information and knowledge from HIV/AIDS and TB programs in Botswana in order to inform and improve programs in Botswana and the region by 2014

During Phase II, ACHAP will work to continue to transition the programs to the government of Botswana and other local organizations and to initiate a comprehensive communications strategy to leverage the achievements and lessons learned.

The partners selected Botswana because it had one of the highest adult prevalence rates of HIV/AIDS in the world (see below), a viable existing healthcare infrastructure, and strong political will and commitment to address the challenges of HIV/AIDS.

From the beginning, Merck and the Gates Foundation sought to create a program that would leverage private-sector management expertise to resolve social and public health issues. They also hoped to create a model of care, which, if successful, could inform and encourage others in government, international organizations, foundations and the private sector working to address HIV/AIDS in other countries or regions.

Lessons Learned in Botswana

- A successful national response to HIV/AIDS requires sound, enabling policy to drive and guide the right course of action
- Local, national and international partners must integrate and align all efforts with the national blueprint
- Success depends on building local capacity and achieving buy-in at all levels
- It is possible to implement effective antiretroviral therapy, even in a resource-limited setting
- A sustainable solution must address both treatment and prevention
- ACHAP is considered an important model for addressing the African HIV epidemic, and lessons learned can be leveraged to inform positive action in other countries in the region

- Working collaboratively and in a complementary fashion with other development partners has enabled the expansion and strengthening of key programs

A DAUNTING TASK

When ACHAP was established in 2000, more than one in four adults was infected with HIV in Botswana—then the highest HIV prevalence rate in the world. HIV prevalence exceeded 30 percent among men and women in the 25–40 age group. More than one-third of children born to HIV-positive women became infected with the disease. The number of AIDS orphans had quadrupled in five years. Fewer than 5 percent of those in need of antiretroviral (ARV) therapy were receiving it, and health facilities were overburdened: Patients who were HIV-infected and in need of care occupied about 60 percent of hospital beds. There was a severe shortage of health workers and physicians, particularly those trained in the area of HIV/AIDS. Life expectancy at birth had declined by 13 years, and between 1991 and 2003, morbidity had increased fourfold among 25–44 year olds. At this rate, the total population of the country was expected to be reduced by 18 percent, while the gross domestic product was projected to decline 4.5 percent annually, resulting in an economy 30 percent smaller than it would have been without the impact of AIDS.

Looking Ahead

While much progress has been made in Botswana, particularly in the areas of treatment, expansion of HIV counseling and testing services, much still needs to be done as part of a comprehensive, sustainable and successful response to the AIDS pandemic in that country. It is becoming increasingly apparent that if Botswana is to get ahead of this epidemic, the focus must be on prevention. In addition, ACHAP recognizes the need to build greater capacity among local organizations, increasing the capacity of communities to utilize and provide HIV/AIDS services.

Therefore, priorities for ACHAP going forward will include the scaling-up of prevention efforts, addressing the needs of patients co-infected with TB, improving the cost effectiveness of the Masa antiretroviral treatment program, and strengthening the capacity of local organizations for a sustainable national response. The ultimate goal is for the efforts and programs ACHAP supports to become either self-sustaining or integrated into the efforts led by the government of Botswana.

PERFORMANCE & COMMITMENTS

ACHAP SUMMARY	2007	2008	2009	2010	2011
ACHAP					
Estimated HIV+ population (total population)	330,347	341,613	350,557	357,847	363,105
New HIV infections (adults only, ages 15+)	18,408	18,271	18,129	17,965	17,791
Annual AIDS deaths (adults only, ages 15+)	7,397	6,539	8,732	10,584	12,659
New HIV infections (children only, ages 0 to 14)	890	874	870	860	843
Annual AIDS deaths (children only, ages 0 to 14)	788	575	482	501	550
Total Orphans	126,666	123,637	122,181	134,381	123,427
The Merck Company Foundation Investment (US$M)	7.0	0.0	6.5	6.0	6.0
TESTING AND TREATMENT					
Batswana who knew their HIV status[1]	50%	63%	75%	NA	NA
Batswana (adults and children) receiving ART by year-end	92,932	117,045	140,167	161,219	178,684
Batswana (adults and children) with advanced HIV infection receiving ART[2]	73%	81%	87%	92%	NA
HIV-positive pregnant women who received ART to reduce the risk of mother-to-child transmission	91%	89%	94%	92%	92%
PREVENTION					
HIV prevalence rate (ages 15 to 49)	26%	25%	25%	25%	25%
Adjusted HIV prevalence rate among pregnant women[3]	34%	NA	32%	NA	30%
HIV prevalence rate among pregnant women ages 15 to 193	17%	NA	13%	NA	10%
Infants born to HIV-infected mothers who are infected	5%	4%	4%	NA	NA
HIV-positive births	2%	2%	1%	NA	NA
Blood supply that was HIV positive[4]	2%	1%	2%	1%	NA
INFRASTRUCTURE DEVELOPMENT AND CAPACITY BUILDING					
Healthcare workers trained through the ACHAP program (cumulative)	5,518	6,300	7,078	7,645	7,645
Infectious disease care clinics and satellite facilities constructed to screen and treat patients with HIV/AIDS	32	35	35	35	35

[1] Indicator no longer being calculated due to repeated challenges.
[2] Estimates from "HIV/AIDS in Botswana Estimated Trends and Implications based on Surveillance and Modeling."
[3] Measurement taken every two years.
[4] Prevalence was not calculated by the national laboratory.
NA: Data not available.

PARTNERSHIPS

The main partners in the African Comprehensive HIV/AIDS Partnerships (ACHAP) are Merck/The Merck Company Foundation, the Gates Foundation and the government of Botswana, but ACHAP works with many different partners from the private sector and civil society.

Government

Within the government, ACHAP works closely with the National AIDS Coordinating Agency within the Office of the President; the Ministry of Health—particularly the Departments of HIV/AIDS Prevention and Care, and Public Health; and various other ministries. The Madikwe Forum—created to bring together ACHAP and senior officials from the Ministries of Health, Finance and Development Planning, Education and Skills Development, Home Affairs, Local Government, Youth Sport and Culture, the National AIDS Coordinating Agency and the Office of the President for regular consultation—helps to monitor progress of ACHAP programs, provide strategic and policy guidance and address issues that arise.

Local Communities

ACHAP works with local institutions, including district administrations, district health management teams and facilities, healthcare workers and other cadres supporting the national HIV response at the district and community levels. Local community leaders and civil society organizations are also critical to implementation.

Other Development Partners

From a multilateral perspective, ACHAP has worked with the United Nations Development Programme (UNDP), the United Nations Children's Fund (UNICEF), the United Nations Joint Programme on HIV/AIDS (UNAIDS), the World Health Organization (WHO), the United Nation's Population Fund (UNFPA), the World Bank, the European Commission and the Global Fund. On the bilateral side, ACHAP works with the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), the U.S. Centers for Disease Control (CDC), and the U.S. Agency for International Development (USAID).

Academia

Academic institutions also play an important role in healthcare capacity building, most notably in developing critical ARV training and preceptorship programs for healthcare workers. Key among ACHAP's academic partners are the University of Botswana, Harvard University, the University of California Los Angeles (UCLA) and the University of Pennsylvania.

Nongovernmental Organizations

The local NGO community is very involved in the ACHAP partnership, including NGOs focused on youth prevention, and/or support for people living with HIV and AIDS, and HIV/AIDS service organizations.

"Botswana has shown an exceptional response to AIDS at the highest levels, and its progress in treatment access is an example to the world. This energy must now inspire a dramatic scale-up of a comprehensive HIV-prevention program for a sustainable, long-term AIDS response."

Peter Piot
Former UNAIDS Executive Director

STRATEGY

ACHAP launched in 2000 with four objectives:

- To improve accessibility to comprehensive HIV prevention, care and support
- To improve access to highly active antiretroviral therapy (HAART) in the public sector for all people living with HIV/AIDS
- To strengthen sustainable improvement in healthcare systems and mitigate the impact of the HIV/AIDS epidemic
- To support NACA in performing a thorough needs assessment in HIV/AIDS prevention and care in all districts in Botswana

In the first four years, the program was delivered through national initiatives, in line with the above objectives, and through an invitation of proposals from a variety of organizations, including tertiary institutions, and research and civil society organizations, in line with the program goals. In 2005, a strategic plan was developed with the following six strategic objectives:

- To scale-up the quality of–and access to–comprehensive HIV prevention services
- To expand HIV counseling and testing capacity
- To increase coverage of quality HIV/AIDS treatment services to all eligible people
- To increase the capacity of communities to utilize and provide HIV/AIDS services
- To improve ACHAP's institutional capacity to deliver effectively on its strategic objectives
- To strengthen partnerships and build capacity to support the sustainability of the national response

In 2007, ACHAP expanded its support to target co-infection of HIV and tuberculosis (TB). HIV infection has fueled an explosive increase in TB cases in Botswana since the early 1990s. In fact, it is estimated that 65–85 percent of TB patients are HIV-positive, and HIV-related TB is the leading cause of death among adult AIDS patients.

One of the strengths of ACHAP has been its full integration with government strategy, as well as its ability to harness private-sector expertise in support of national efforts to address HIV/AIDS. All ACHAP programs are developed through extensive consultation with all relevant government ministries. Partnership programs must build local capacity, demonstrate a measurable impact on the epidemic, be cost-effective, be appropriate to the setting in which they are delivered, and be sustainable beyond the life of the partnership. All programs were required to fit within the strategic goals of the Government of Botswana's National Strategic Frameworks for HIV/AIDS.

ACHIEVEMENTS

The African Comprehensive HIV/AIDS Partnership (ACHAP) demonstrates how public-private partnerships can make a meaningful and lasting contribution to a major public health challenge, helping to restore hope and transform the morale and prospects of an entire nation.

ACHAP has made a significant contribution to Botswana's response to the HIV and AIDS epidemic and has served as a catalyst for providing urgently needed infrastructure, equipment, human resources, training and program support for the Botswana ARV program.

Major achievements of the program:

- Halved the mortality rate in adults, saving over 50,000 lives between 2002 and 2007
- Dramatically reduced mother-to-child transmission and reduced new infections among children by at least 80 percent
- Contributed to significant improvements in blood supply safety
- As of January 2012, 150,237 patients were on treatment in the public sector, of which 62 percent were females. Children aged under 13 years accounted for 5.6 percent (8,357) of the public sector patients. A further 16,181 patients were treated by the private sector under the Government's Outsourcing Program.
- Another 14,569 patients were being treated in the private sector of the country, by the Medical Aid Schemes and Workplace Programs. This gives a total of 180,987 patients currently receiving HAART in Botswana, which amounts to

96.5 percent of the projected 187,484 adults and children in need of ART at the end of January 2012. There were 1,587 new clients started on HAART in the public sector in January 2012, of which 76 percent were initiated in clinics. A cumulative total of 19,560 patients died while on HAART since the inception of the ARV program in 2002.

- Developed sustainable treatment by supporting the recruitment of over 200 positions, on civil service terms, to help staff the treatment program and its rollout to the clinics over the project period. Through successful absorption of these staff positions into the government establishment, and with ongoing training of new staff, patient access to treatment is now available in over 200 clinics countrywide.
- Supported the development of the first National Strategic Framework for HIV and AIDS (2003–2009) and the second National Strategic Framework (2010–2016)
- Increased laboratory capacity so that more than 130,000 patients could be supported in their treatment in the public sector through a decentralized diagnostic and monitoring capacity that increased from an initial two referral centers to 14 district and primary hospitals. This enabled the system to cope with up to 20,000 new patients per year.
- Supported the introduction of routine HIV counseling and testing as part of normal medical care
- Provided, in collaboration with Harvard University and the Botswana Ministry of Health, training for more than 7,600 of Botswana's healthcare workers in eight core modules on HIV and AIDS clinical care, largely with in-country faculty. This effort expanded on an earlier effort in which more than 3,200 physicians, nurses and other healthcare professionals received hands-on, clinic-based training from international HIV and AIDS experts through the partnership's preceptorship program between 2002 and 2006.
- ACHAP is currently transitioning its treatment program support to the government of Botswana, a process reflecting the manner in which this program has matured over the past decade

ACHAP has also made significant contributions in the area of HIV prevention, including the development of a national plan for scaling up prevention, as well as improving condom availability and safe blood transfusions. However, ACHAP has not had the same impact in helping to drive prevention during the first phase of the program as effectively as it did treatment. Interventions need to be rapidly scaled up to slow the spread of HIV infection and meet the ambitious national goal of "zero new infections by 2016."

HIV CARE COLLABORATIVE

Merck announces a new collaborative effort to improve HIV care in the United States.

To help address remaining barriers to HIV care, especially among underserved populations, The Merck Company Foundation has established a three-year initiative—*HIV Care Collaborative for Underserved Populations in the United States*—to connect more people living with HIV to the care they need to stay healthy. The Foundation is committing $3 million to support local health departments in Atlanta, Georgia; Houston, Texas; and Philadelphia, Pennsylvania. Nearly a third or more of Americans known to have HIV in the United States are not in care, and these cities are among the top 10 with the highest HIV burden in the U.S.[1,2]

Research shows that when you are able to connect those who are HIV-positive with ongoing care, it not only reduces HIV risk behaviors but also reduces viral load from antiretroviral therapy (ART), which collectively contribute to overall decreases in HIV transmission. That's why the U.S. National HIV/AIDS Strategy (NHAS) calls for the establishment of "a seamless system to immediately link people to continuous and coordinated quality care when they are diagnosed with HIV."[3]

In alignment with this overall NHAS goal, the Collaborative is tackling this challenge head on and will work to improve access to available healthcare for HIV-positive people by:

- Introducing innovative, community-based approaches with local health systems to improve timely access to quality HIV care for underserved adult populations
- Strengthening healthcare providers' skills and relationships with patients
- Helping to reduce new HIV infections among populations at greatest risk
- Sharing important findings and lessons learned to further the development of innovative, multifaceted programs that improve the quality of healthcare for people living with HIV/AIDS

The Collaborative will not be starting from scratch at the three program sites, but will build on efforts already underway:

- **Atlanta/Fulton County Department of Health and Wellness: *Bridging the Gap*** will focus on HIV-positive clients referred to and enrolled in the county's HIV Primary Care Clinic by implementing a community-based-care Linkage Coordinator and referral program.
- **Houston Department of Health and Human Services: *Expanded Linkage to Care Initiative (ELCI)*** will bring together healthcare providers, community groups, and researchers to launch community-wide System Navigator and Data Matching programs to identify all those living with HIV who have fallen out of care and re-engage them.
- **The City of Philadelphia Department of Public Health: *Engaging HIV+ Patients in Care Initiative*** will use System Navigator to help guide HIV patients through the local healthcare system to improve regular care, viral suppression, and management of HIV-related comorbidities and other chronic diseases.

The George Washington University (GWU) School of Public Health and Health Services will serve as the National Program Office for the HIV Care Collaborative. GWU will provide overall technical assistance to each of the program sites; help foster a "peer-learning" network among the health departments and local partners by regularly convening meetings and forums and by sharing best practices and challenges; and evaluate the progress and results of programs.

[1] Mugavero, M.J., Lin, H.Y., Allison, J.J., Willig, J.H., Chang, P.W., J. et al., (2007) "Failure to Establish HIV Care: Characterizing the "No Show" Phenomenon," *Clinical Infectious Disease*, 45, 127–30.
[2] Centers for Disease Control and Prevention, Estimates of new HIV infections in the United States. August 2008. www.cdc.gov/hiv/topics/surveillance/resources/factsheets/pdf/incidence.pdf.
[3] The White House Office of National AIDS Policy, National HIV/AIDS Strategy for the United States, July 2010. www.whitehouse.gov/sites/default/files/uploads/NHAS.pdf.

MERCK MECTIZAN DONATION PROGRAM

One of the most significant initiatives undertaken by Merck to help improve access to medicines in developing countries is the Merck MECTIZAN® (ivermectin) Donation Program.

Established 25 years ago, the MECTIZAN Donation Program is the longest-running disease-specific drug donation program and public-private partnership of its kind, and is widely regarded as one of the most successful public-private health collaborations in the world.

In 1987, Merck announced that it would donate MECTIZAN, our breakthrough medicine for the treatment of onchocerciasis, to all who needed it, for as long as needed. More commonly known as "river blindness," onchocerciasis is transmitted through the bite of black flies and can cause intense itching, disfiguring dermatitis, eye lesions and, eventually, blindness. The disease is one of the leading causes of preventable blindness worldwide.

MECTIZAN relieves the agonizing itching that accompanies the disease and halts progression toward blindness—two characteristics of the disease that dramatically affect the quality of life. With only one annual dose, MECTIZAN is well suited for distribution in remote areas by community health workers. It is the only well-tolerated drug known to halt the development of river blindness.

To facilitate the donation and delivery of MECTIZAN, and eliminate river blindness as a public health problem, Merck established a multisectoral partnership involving the World Health Organization (WHO), the World Bank and UNICEF, as well as ministries of health, nongovernmental development organizations and local communities. At the program's inception in 1988, Merck also established the MECTIZAN Donation Program Secretariat, housed at the **Task Force for Global Health**. The Secretariat works with the independent MECTIZAN Expert Committee to provide medical, technical and administrative oversight of the donation of MECTIZAN. In 1991, Merck, the Secretariat and the WHO established the **Non-Governmental Development Organization (NGDO) Coordination Group for Onchocerciasis Control**; NGDOs play a critical role in MECTIZAN distribution through their work with ministries of health, their expertise in program management and their financial support. They have also played an important role in developing communication strategies that are helping to achieve high coverage and compliance with treatment. This balanced governance and organizational structure continues to support and facilitate the donation of MECTIZAN.

In 1998, Merck expanded the Merck MECTIZAN Donation Program to include the prevention of lymphatic filariasis (LF) in African countries where the disease coexists with river blindness. LF is a devastating parasitic infection spread by mosquitoes. It is caused by threadlike parasitic worms that damage the human lymphatic system. The disease is currently estimated to infect more than 120 million people, with more than 40 million incapacitated or disfigured with swelling of the limbs and breasts (lymphoedema) and genitals (hydrocele). Swollen limbs often develop dramatically thickened, hard, rough and fissured skin (elephantiasis).

In lymphatic filariasis, parasitic filarial worms are transmitted by a mosquito and lodge in the lymphatic system. Those affected may develop kidney damage caused by blockage of the lymphatic system.

Merck has made a long-term commitment to donate as much MECTIZAN as necessary to treat river blindness and to prevent lymphatic filariasis. The goal is to eliminate both diseases as public health problems.

In December 2007, Merck announced a **donation of $25 million over eight years** as part of an initiative with the World Bank to raise approximately $50 million to help eliminate river blindness in Africa. The World Bank has raised the remaining $25 million, providing all the funding necessary for 28 African countries affected by river blindness to develop self-sustaining MECTIZAN distribution programs by 2015. With this funding, many community-directed treatment with Ivermectin (CDTI (community-directed treatment with ivermectin) programs will

also be able to implement at least one other health intervention in addition to MECTIZAN delivery, while helping countries and their partners to improve healthcare by expanding other health programs to hard-to-reach communities.

"Twenty-five years after the donation of Mectizan through the Mectizan Donation Program, we are now close to eliminating river blindness from the Western Hemisphere. This remarkable achievement is also considered feasible in parts of Africa where we once hoped only to control the disease. Thanks to this donation and to the commitment of endemic countries, nongovernmental organizations (NGOs), UN agencies, and the donor community, we can now envision a world free of this blinding and disfiguring skin disease."

Dr. Margaret Chan
Director-General, World Health Organization

Adverse Experience Reporting

While side effects following treatment with MECTIZAN are rare, Merck has developed a rigorous program for monitoring and reporting any adverse experiences (AEs) in the field. With the help of local nongovernmental development organizations (NGDOs), all field-based community distributors are trained in AE reporting; all AEs must be reported to Merck, which then reports them to drug safety and regulatory agencies in the United States and internationally.

The MECTIZAN Expert Committee, ministries of health and the WHO also play a key role in making sure best practices are applied for surveillance of AEs at the community level. The AE reporting form itself has been revised several times during the more than 20-year history of the program to incorporate feedback from clinicians and public health administrators in the field.

PERFORMANCE & COMMITMENTS

Performance

RIVER BLINDNESS AND LYMPHATIC FILARIASIS (LF) SUMMARY	2007	2008	2009	2010	2011
Direct investment in the MECTIZAN Donation Program (US$M)	3.1	5.5	5.5	5.5	5.5
Treatments approved (in millions)	128	174.2	211	220	270
Market value of MECTIZAN donations (US$M)	480	549	606	651	747
Countries with LF elimination programs supported by the MECTIZAN Donation Program (Target: 30)	14	15	17	17	17
Latin America countries where treatment with MECTIZAN has been stopped to allow for post-treatment surveillance and certification that the disease has been eliminated (Target: 6)	1	1	1	2	4
Treatments with MECTIZAN approved for river blindness (in millions)	80.5	86.7	100	100	140
Treatments with MECTIZAN approved for LF (in millions)	47.8	87.5	109	120	130

Since the inception of the Merck MECTIZAN® Donation Program (MDP) in 1987, Merck has donated more than 4 billion tablets of MECTIZAN (ivermectin) for river blindness, with nearly 1 billion treatments approved since 1987.

In 2011, 140 million treatments were approved for river blindness and 130 million treatments were approved for LF (with 37 million of those being for both river blindness and LF). To date, Merck has invested approximately $50 million in direct financial support

for the MECTIZAN Donation Program, in addition to donating 1 billion treatments of MECTIZAN.

The donation of MECTIZAN also has led to the development of CDTI (community-directed treatment with ivermectin) programs, through which trained community volunteers distribute medicines, a critical element to effective mass treatment programs in remote areas that often lack trained healthcare workers. CDTI programs currently exist in more than 146,000 communities in 28 countries in Africa; CDTI programs for lymphatic filariasis exist in 16 countries in Africa and in Yemen. The CDTI strategy has enabled other health and social services—such as vitamin A distribution, cataract identification, immunization campaigns, training programs for community health workers, and census-taking—to be introduced in often remote communities. Close to 60 percent of MECTIZAN community distributors have assumed the added responsibility of at least one additional health intervention.

Impact

- In 2002, the OPEC Fund estimated that the Merck MECTIZAN Donation Program prevented 40,000 cases of river blindness annually, and that a direct result of this would be a gain of 7.5 million years of productive adult labor
- In the 19 countries of the African Program for Onchocerciasis Control (APOC), more than 3 million disability-adjusted life years have been saved since 1995, and the prevalence of itching and skin lesions due to onchocerciasis has been reduced by 80 percent
- The impact of the MECTIZAN Donation Program extends beyond the immediate health benefits; estimates show that investments in river blindness control programs (e.g., MECTIZAN treatment and aerial spraying to control black fly populations) are helping people live not only healthier but also more productive lives
- In 2011 Colombia applied to the World Health Organization for **certification that river blindness was eliminated**, becoming the first country to achieve that milestone. By 2016 it is expected that all six formerly affected countries in the Western Hemisphere (Brazil, Colombia, Ecuador, Guatemala, Mexico, Venezuela) will have achieved certification that river blindness has been eliminated.
- In 2009, Togo became the first sub-Saharan Africa country to stop treatment for LF; continuing surveillance confirms that transmission of the **disease was successfully interrupted**
- In 2009, the World Health Organization released a study showing evidence that elimination of onchocerciasis is feasible in Africa using currently available tools

Commitments

While much has been achieved in the treatment and progress toward elimination of onchocerciasis, there remain a number of additional challenges that Merck and our partners are actively addressing.

To ensure continued supply of MECTIZAN (ivermectin) to support the activities of other program partners, Merck remains committed to continuing to donate as much MECTIZAN as is necessary to eliminate river blindness globally and to eliminate lymphatic filariasis (LF) in African countries where the diseases coexist.

We also recognize the need to strengthen national capacity in all endemic countries to allow for integration of CDTI into a country's healthcare system and co-implementation of other health interventions. Our ongoing support of African river blindness programs via the World Bank's trust fund will help support CDTI activities.

Beyond river blindness and LF, the MECTIZAN Donation Program is a key component of the growing trend toward integrated programs to address neglected tropical diseases (NTDs.) In fact, the integration of onchocerciasis and lymphatic filariasis efforts via the MECTIZAN Donation Program, which began in 1998, set the foundation for many of these efforts, and Merck will remain engaged with key stakeholders to help with integration programs where feasible.

As a result of our activities and the collaboration and contributions of the wide range of committed partners, we expect to achieve the following milestones in the years ahead:

- By 2013, transmission of river blindness in all areas of the Americas is expected to be halted, allowing treatment with MECTIZAN to be stopped in the Western Hemisphere
- By 2015, program partners plan to achieve 100 percent geographic coverage of treatment with MECTIZAN in all river blindness–affected areas in Africa

We expect elimination of lymphatic filariasis as a public health problem by the year 2020.

MERCK
Be well

GARDASIL ACCESS PROGRAM

In 2007, Merck made a major commitment to help improve access to GARDASIL® in developing countries.

Through the **GARDASIL [Human Papillomavirus Quadrivalent (Types 6, 11, 16, 18) Vaccine, Recombinant] Access Program**, Merck pledged to donate at least 3 million doses of GARDASIL for use in smaller-scale human papillomavirus (HPV) vaccination projects in eligible lowest-income countries around the world, to enable participating organizations and institutions in those countries to gain operational experience in designing and implementing HPV vaccination projects.

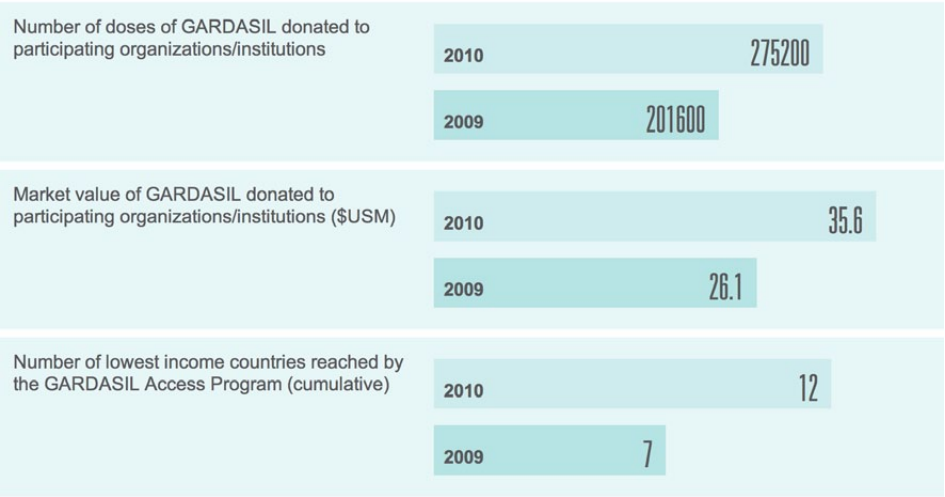
By actively disseminating information from the operational experiences and the lessons learned by participants, the program is contributing to the public knowledge base on HPV vaccine access and child and adolescent immunization models in developing countries.

The GARDASIL Access Program receives proposals from applicants to conduct smaller scale HPV vaccination projects, rather than nationwide programs. All applicants must secure formal endorsement from their respective ministries of health, and are encouraged to follow World Health Organization (WHO) recommendations and guidelines for HPV vaccination.

The program is managed by **Axios Healthcare Development (AHD)**, a U.S. nonprofit organization, with strategic guidance provided by the independent **GARDASIL Access Program Advisory Board**, made up of international public health experts. AHD administers the program, reviews and approves applications based on Advisory Board recommendations, and coordinates delivery of donated vaccine to participants, with technical assistance from **Axios International**, a public health consultancy specializing in developing and emerging countries.

PERFORMANCE & COMMITMENTS

GARDASIL ACCESS PROGRAM SUMMARY



As of December 2011:

- The GARDASIL Access Program Advisory Board has recommended, and Axios Healthcare Development (AHD) has subsequently approved, applications from 28 organizations and institutions in 23 lowest-income countries.
- More than 1,300,000 doses of GARDASIL, enough to vaccinate more than 440,000 eligible girls, have been approved by AHD for donation to this current group of 28 program participants.
- More than 875,000 doses of GARDASIL have shipped to 19 participants, in support of their proposed HPV-vaccination projects in 19 countries: Bhutan, Bolivia, Cambodia, Cameroon, Georgia, Ghana, Guyana, Haiti, Honduras, Kenya, Kiribati, Lesotho, Moldova, Mongolia, Nepal, Tanzania, Papua New Guinea, Uganda and Uzbekistan.
- These 19 participants have completed 10 HPV-vaccination projects in 8 countries: Bhutan, Bolivia, Cambodia, Haiti, Lesotho, Moldova, Nepal and Tanzania.
- There are nine ongoing HPV-vaccination projects in eight countries: Bolivia, Cameroon, Georgia, Kiribati, Lesotho, Nepal, Uzbekistan and Uganda.
- Axios Healthcare Development routinely interviews all GARDASIL Access Program participants and analyzes their formal progress reports to synthesize lessons learned from the program. AHD also publishes semiannual program newsletters highlighting the experiences of participants.

MERCK VACCINE NETWORK—AFRICA

In Africa, approximately 8.3 million infants each year do not receive the most basic vaccines.

According to the World Health Organization (WHO), one major reason for low immunization coverage in many developing countries is the lack of skilled health workers.

As a founding partner in the **GAVI Alliance**, a historic public-private partnership committed to increasing access to immunization in lowest-income countries, Merck responded to this public health challenge by launching a multiyear philanthropic initiative designed to help strengthen the capacity of Expanded Program on Immunization (EPI) health workers in sub-Saharan Africa.

Formally endorsed by the GAVI Alliance in 2003, the Merck Vaccine Network–Africa (MVN-A) supports collaborative partnerships in the development and implementation of sustainable EPI management training programs in Kenya, Uganda, Mali and Zambia. MVN-A also supports the achievement of the UN Millennium Development Goals, including reducing by two-thirds the mortality rate among children under five by 2015.

With $4.8 million in support from **The Merck Company Foundation**, collaborative partnerships established MVN-A training programs in Kenya, Mali, Uganda and Zambia. These MVN-A training programs provide mid- to high-level immunization program managers in these four countries with training in vaccine management and immunization services. Each MVN-A program is managed and administered by two primary institutions that have forged a broader collaborative partnership with ministries of health and education, nongovernmental organizations, medical and nursing schools, and multilateral organizations such as WHO and UNICEF:

- **MVN-A Kenya:** Indiana University School of Medicine (Indianapolis, Indiana, USA) and Moi University School of Medicine (Eldoret, Kenya)
- **MVN-A Mali:** Center for Vaccine Development at the University of Maryland School of Medicine (Baltimore, Maryland, USA) and Centre pour le Développement des Vaccins, Mali (Bamako, Mali)
- **MVN-A Uganda:** Task Force for Global Health (Decatur, Georgia, USA) and Makerere University School of Public Health (Kampala, Uganda)
- **MVN-A Zambia:** Brighton and Sussex University Hospitals NHS Trust (Brighton, England, UK) and University Teaching Hospital of the University of Zambia School of Medicine (Lusaka, Zambia)

Each MVN-A program has developed and continues to adapt customized training curriculums and methodologies to improve the capacity of EPI health workers and address evolving national immunization management needs. These tools are based on the findings of baseline training needs assessments in all four countries, which helped to identify specific gaps in the knowledge, skills and practice of EPI health workers, as well as inadequacies in reference materials, cold chain equipment and logistical resources.

> *"MVN-A is helping the Republic of Mali and its people address this critical issue by building a skilled cadre of immunization managers. This partnership is a testament to how the public and private sectors can come together to help strengthen healthcare capacity and ensure the health of our nation's children."*
>
> Professor Abdel Kader Traoré
> Ministry of Health, Republic of Mali

Health worker training initiatives in sub-Saharan Africa face numerous operational challenges, including maintaining, adapting and continuously improving training activities to address high staff turnover; internal health worker migration from low-population rural areas to high-population urban areas; and

unforeseen events, such as natural disasters and political unrest that can lead to disease outbreaks.

For this reason, each MVN-A training program is fully integrated into the existing national healthcare infrastructure, ensuring complete alignment with the immunization priorities identified by the ministry of health and also with strategic policies and initiatives endorsed by regional and international stakeholders, such as WHO, UNICEF and the GAVI Alliance.

PERFORMANCE & COMMITMENTS

From 2003 to 2011, MVN-A programs in Kenya, Mali, Uganda and Zambia trained more than 1,600 Expanded Program on Immunization (EPI) health workers across all four countries. Trainees in each country have demonstrated significant improvement in perceived ability, competence, knowledge and skills in most targeted areas of EPI management. In addition, MVN-A graduates have returned to their home medical facilities to disseminate their expertise and knowledge to fellow health workers.

In all four countries, "training of trainers" sessions conducted by ministry of health and WHO EPI personnel enhanced the national training capacity of the MVN-A programs. The MVN-A programs have also found that, while cascade training appears to be an efficient way to reach several management levels, it requires extensive "training of trainers" and targeted follow-up to effectively reach EPI health workers at peripheral levels. Supervisory training can enhance the distribution of information to peripheral health centers. But the MVN-A training programs have concluded that, to maintain high immunization coverage, there is a need to significantly improve supportive supervision practices in each country and make public resources available to conduct more frequent, focused training of midlevel EPI managers to support evolving national immunization priorities.

As The Merck Company Foundation prepares to conclude funding support in 2012, MVN-A collaborators have advanced efforts to sustain their training programs in close partnership with key national stakeholders. Ministries of health remain highly committed partners in all four programs, having enlisted MVN-A graduates to conduct operational- level training (Kenya, Mali, Uganda), disease outbreak responses (Kenya, Uganda), mass immunization campaigns in camps of internally displaced persons (Kenya) and new vaccine introductions (Kenya, Mali and Zambia).

MVN-A PERFORMANCE DATA SUMMARY	2007	2008	2009	2010	2011
Merck investment in MVN-A (US$)	1,000,000	800,000	600,000	600,000	200,000
Number of health workers trained through MVN-A[1]	97	142	313	205	233

[1] In 2010, the MVN-A programs in Kenya and Mali allocated significant time and resources toward program evaluation, sustainability planning and publication efforts, leading to fewer health workers trained across all four countries when compared to 2009.

MERCK MEDICAL OUTREACH PROGRAM

Established in 1958, the Merck Medical Outreach Program (MMOP) is the primary mechanism through which Merck donates its pharmaceuticals, vaccines and consumer health products for humanitarian assistance in the developing world and in support of disaster relief and emergency situations worldwide.

MMOP, managed by Merck's Office of Corporate Responsibility, is one mechanism through which we help to expand access to our products especially, in the developing world. The program enables Merck to donate critical pharmaceuticals, vaccines and consumer health products to a limited number of qualified, U.S.-based, private voluntary organizations (PVOs). The scope of MMOP varies from year to year and is influenced by changing medical needs in developing countries, the quantity of Merck medicines available for donation, and the random nature of natural and man-made disasters.

Donations of Merck medicines are made primarily through six qualified nongovernmental organizations (NGOs):

- **AmeriCares**
- **Catholic Medical Mission Board (CMMB)**
- **Direct Relief International**
- **IMA World Health**
- **MAP International**
- **Project HOPE**

Each of these organizations has a long-standing relationship with the company; demonstrates integrity of purpose; provides assurance that Merck products will be securely warehoused and not diverted, mishandled or misappropriated; and has well-established programs for the ill and needy in developing countries. The company, through MMOP, monitors the NGOs and maintains the controls necessary for the proper distribution and handling of Merck medicines. Merck does not provide donations of expired products or of products with inadequate dating (allows for proper administration prior to expiration).

MMOP comprises three components:

The Merck Annual Product Allotment Program

Through this program, six qualified NGOs can order fully dated medicines of their choice from the company's current product line, up to an annually authorized amount. Through this innovative approach to donations, our partners can receive a sustained and predictable supply of needed medicines, crucial to the effective planning of ongoing humanitarian programs. The first program of its kind in the industry, it has served as a model for other pharmaceutical companies' donation programs.

Ongoing Donations of Pharmaceuticals and Vaccines

Donations of Merck's pharmaceuticals and vaccines are made in response to proposals from our partners to address specific short- and longer-term objectives and needs of their programs around the world. We also offer medicines and vaccines to our partners proactively and as they become available, for use in their ongoing humanitarian programs.

Disaster and Emergency Relief

Merck's Disaster Relief program is designed to provide assistance during major disasters and to support efforts in preparedness and recovery. Merck's Office of Corporate Philanthropy serves as the central clearinghouse for information regarding Merck's companywide response to major disasters, and it works with the Office of Corporate Responsibility to make decisions related to our donations of cash, as well as medicines, vaccines and/or consumer health products through MMOP. For more information, please **click here** .

In conducting MMOP, Merck adheres to the **World Health Organization (WHO) Guidelines for Drug Donations**. Merck played an important role in the development of these guidelines through our involvement in the **Partnership for Quality Medical Donations (PQMD)**, an alliance of NGOs and medical product manufacturers dedicated to raising the standards of medical donations to meet the needs of underserved populations and disaster victims around the world. We also worked with the United Nations and the World Economic Forum to develop the **Guiding Principles for Public-Private Collaboration for Humanitarian Action**.

PERFORMANCE & COMMITMENTS

In 2011, MMOP donatons of medicines, vaccines and consumer healthcare products supported child vaccination programs in the Dominican Republic and Paraguay,; provided disaster assistance in the United States, Libya, Turkey and Central America; and reached many thousands more worldwide through the ongoing medical programs of our partner NGOs. For more information about our product donations to ACHAP, please **click here**.

In addition to MMOP, local Merck subsidiaries donated ,more than the equivalent U.S. market value of $5 million in products locally for humanitarian aid and disaster response.

MMOP SUMMARY	2009	2010	2011
Number of countries and territories reached by the Merck Medical Outreach Program	99	97	82
Total value of product donations (US$M)[1]	80.2	75.2	89.8
Value of medicines, vaccines and consumer care products (US$M)[1,2]	NA	NA	66.0
Disaster relief contributions (product) (US$M)[1]	0.4	10.9	10.4
Product donations to the African Comprehensive HIV/AIDS Partnerships (ACHAP) (US$M)[1]	NA	NA	23.8

[1] We value our product donations based on the U.S. wholesale acquisition cost.
[2] Figure includes the value of donations to the African Comprehensive HIV/AIDS Partnerships (ACHAP).
NA: Data is not available.

PATIENT ASSISTANCE PROGRAM

Merck believes that donating medicines and vaccines, while not a sustainable solution to the access challenge in the United States, can provide needed assistance under certain circumstances.

To address the complex issues involved in the challenges of access to health, Merck is working with government and private sector partners to help find long-term policy approaches that make health coverage available to the people who need it. In the meantime, Merck has created several programs to help address this challenge.

More than 50 years ago, Merck created our first U.S. Patient Assistance Program to keep affordable medicines within patients' reach. Today, our patient assistance offering includes seven programs. Through these programs, Merck has provided more than 32 million free prescriptions and vaccines, representing a total value (Wholesale Acquisition Cost) of more than $2.5 billion in the past ten years alone.

Merck Patient Assistance Program: For more than 50 years, the Merck Patient Assistance Program has provided Merck medicines free of charge to millions of eligible individuals who, without our assistance, could not otherwise afford them. A single application may provide for up to one year of medicine free of charge and an individual may reapply as many times as needed. Under certain circumstances, individuals who don't meet the prescription drug coverage criteria may still qualify for the Merck Patient Assistance Program if they attest that they have special circumstances of financial and medical hardship, and their income meets the program criteria.

SUPPORT™ Program: In 2007, we extended our U.S. SUPPORT Program for HIV medicines to include our new antiretroviral ISENTRESS® (raltegravir). The SUPPORT Program provides both personalized reimbursement support that helps patients navigate what can be a complex insurance and reimbursement system and provides assistance with prior authorization, identifying insurance options and reimbursement. The program also provides medicine free of charge to eligible patients lacking coverage for ISENTRESS and CRIXIVAN® (indinavir sulfate).

ACT Program: The ACT Program* is specifically designed to assist patients with insurance reimbursement issues and questions, and to provide product free of charge for those eligible individuals lacking coverage for Merck's Oncology and Hepatitis C medicines.

Merck Hotline for INVANZ®, PRIMAXIN® and CANCIDAS®: The Merck Hotline for INVANZ (ertapenem sodium), PRIMAXIN (imipenem and cilastatin) and CANCIDAS (caspofungin acetate) program provides reimbursement support and patient assistance/product replacement to healthcare facilities.

Merck Vaccine Patient Assistance Program Launched in 2006, the Merck Vaccine Patient Assistance Program offers a private and confidential program that provides Merck's adult vaccines free of charge to uninsured adults age 19 or older who cannot afford their vaccines.

Institutional Patient Assistance Program (IPAP): Merck provides medicines free of charge through bulk donations to enrolled hospitals in the United States that serve a disproportionate number of low-income, uninsured patients. The hospitals provide the product free of charge to eligible patients.

State Agency-Supported Programs: Merck also provides medicines free of charge through bulk donations to several nonprofit, state-sponsored prescription drug programs serving patients who meet eligibility criteria. Merck currently provides free medicines to state clinics in Illinois, Kentucky, Louisiana, Maryland, North Carolina, South Carolina, Texas, Virginia and West Virginia.

Effective March 1, 2009, Merck increased the income limit to the Merck Patient Assistance Program to enable more people in need to receive Merck medicines for free. Patients now may qualify for the program if their household income

is $43,560 or less for individuals, $58,840 or less for couples or $89,400 or less for a family of four.

Most of Merck's PAPs also continue to be available to Medicare beneficiaries who are not enrolled in a Medicare drug plan, as well as Medicare beneficiaries who enroll in a Medicare drug plan but still cannot afford their Merck medication. Such individuals have to attest that they have special circumstances of financial and medical hardship and that their income meets the program criteria.

*The product costs associated with the ACT Program and SUPPORT are being captured under the PAP Foundation as of August, 2010.

For program details, including eligibility requirements, visit MerckHelps.com or call 1-800-50-MERCK.

Designed for Ease of Use

In recent years, we redesigned the Merck Patient Assistance Program with the goal of simplifying and streamlining the patient assistance process for both healthcare providers and patients. As a result:

- A simple one-page, two-sided form was created
- To request enrollment, only a completed application signed by both the patient and the prescriber is required
- Spanish education materials and applications are available
- Patients can receive a 90-day supply of Merck medicines with up to three refills—for a total of up to one year of medication
- Up to three scripts per application can be submitted
- We provide the option of mailing medicines directly to a patient's home or to a prescriber's office
- Under special circumstances, patients with insurance but with extenuating circumstances can request that an exception be made
- In 2008, in an effort to simplify patient access further, we changed the exceptions process to no longer require a prescriber's signature to the "exceptions request" authorization form, although a prescriber's signature is still required on the initial PAP application

Communicating Our Programs to Doctors and Consumers

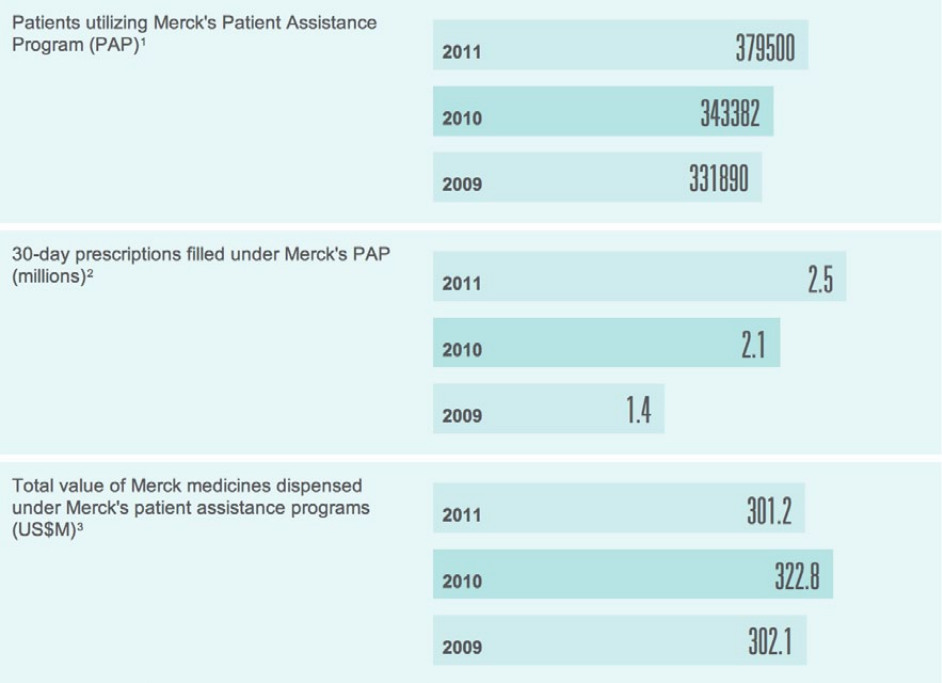
Merck is also working to raise awareness of our PAP to doctors and eligible patients via brochures about and applications for the Merck Patient Assistance Program distributed by our sales representatives to physician offices and clinics nationwide. Beginning in 2008, all toll-free phone lines for Merck medicines include an option for patients to learn about the Merck PAP. In 2009, we added PAP information to all new Merck direct-to-consumer advertisements, including a phone number for more information.

Partnership for Prescription Assistance

Merck also participates in the pharmaceutical industry initiative Partnership for Prescription Assistance (PPA). The Partnership brings together America's pharmaceutical companies, as well as doctors, patient advocacy organizations and civic groups to help low-income, uninsured patients get free or nearly free brand-name medicines. PPA does this by offering one place—a single website—that provides information and access to more than 475 public and private patient assistance programs, including more than 200 programs offered by pharmaceutical companies like Merck. To date, the PPA has helped more than 6.8 million patients.

Merck's participation in PPA underscores the company's commitment to helping the uninsured gain access to Merck medicines. To learn more about the Partnership for Prescription Access, visit **www.pparx.org**.

PERFORMANCE & COMMITMENTS



[1] Total represents 2011 volumes of the Merck Patient Assistance Program, the Merck Vaccine Patient Assistance Program, the Merck Patient Assistance Bulk Replacement Program, the SUPPORT Program, the ACT Program and the Merck Hotline. Totals for 2009 and 2010 includes the Merck Patient Assistance Program (PAP), the U.S. Merck Vaccine Patient Assistance Program, the Schering-Plough Patient Assistance Program and the Merck/Schering-Plough Pharmaceutical Patient Assistance Program. The 2009 total also includes legacy Schering-Plough PAP numbers for the first half of the year; legacy Schering-Plough and Merck/Schering-Plough products were integrated into the Merck patient assistance programs effective August 2010.
[2] Total for 2011 represents volumes of the Merck Patient Assistance Program (PAP) only. For 2009 and 2010, totals include legacy Merck data only; legacy Schering-Plough data is not available due to integration following the merger.
[3] Total for 2011 is based on the U.S. wholesale acquisition cost (WAC) and cover the Merck Patient Assistance Program (PAP), the Merck Vaccine Patient Assistance Program, the Merck Patient Assistance Bulk Replacement Program, the SUPPORT Program, the ACT Program and the Merck Hotline. Totals for 2009 and 2010 include the U.S. Merck Vaccine Patient Assistance Program and are based on the U.S. wholesale acquisition cost (WAC).

- We plan to continue to report on Patient Assistance Program usage
- We plan to continue to work to increase awareness of not only our Patient Assistance Programs but also of the Partnership for Prescription Assistance

MERCK
Be well

ELIGIBILITY FOR MERCK PROGRAMS

If you have been prescribed a Merck medicine, you may be eligible for the program if all three of the following conditions apply:

- You are a U.S. resident and have a prescription for a Merck medicine from a doctor licensed in the United States.[1]

AND

- You do not have insurance or other coverage for your prescription medicine. Some examples of other insurance coverage include private insurance, HMOs, Medicaid, Medicare, state pharmacy-assistance programs, veterans assistance, or any other social service agency support.

AND

- You cannot afford to pay for your medicine. You may qualify for the program if you have a household income of $43,320 or less for individuals, $58,280 or less for couples, or $88,200 or less for a family of four.[2]

More information is available at **MerckHelps.com**.

[1] You do not have to be a U.S. citizen. Legal residents of the United States are also eligible.
[2] At Merck we realize that sometimes exceptions need to be made based on the patient's individual circumstances. If you do not meet the prescription drug coverage criteria, but your income meets the program criteria and there are special circumstances of financial and medical hardship that apply to your situation, you can request that an exception be made for you.

COMMITTED TO IMPROVING ACCESS TO HIV CARE

Our commitment to helping improve access in HIV is steadfast, to meet the evolving needs of the community.

The challenge of HIV is vast. For more than 25 years, Merck has sought to make a difference in the fight against HIV, particularly in the developing world. But the need is greater than the results any one stakeholder can deliver, requiring coordinated efforts among many. After a decade of specific efforts to increase access to HIV treatment in the developing world, it is clear that access to care is about more than the price of medicines and that collaboration has been essential to the progress made against HIV

It Takes a Multifaceted Approach to Improve Access

Our commitment to working with governments, donors, innovator and generic manufacturers, multilateral organizations and civil society to address the full range of factors affecting access is strong. Since 1985, we've been engaged in **research and development** efforts in both HIV prevention and treatment. But research is just one part of our comprehensive strategy to strengthen access.

We have seen that ensuring access requires a broad, comprehensive approach. This is why we are committed to improving patient access through expanded availability, enhanced access strategies and extensive local community support.

To make this possible, today we employ many strategies to meet the needs of a particular region or country, including seeking rapid **registration** of our antiretrovirals; developing **pediatric formulations**; generating support for clinical studies in resource-limited settings; creating differential-pricing policies; establishing strong collaborations with government, manufacturers and other stakeholders; and providing local investment through on-the-ground support for affected communities.

We believe it is critical to invest in HIV at the local level. This investment supports healthcare professionals and the communities they serve, and assists in providing much-needed education to help ensure appropriate HIV care and treatment in all regions of the world. In sub-Saharan Africa, for example, Merck has expanded resources to provide medical education to healthcare workers and to help ensure appropriate use of our antiretrovirals. We have invested at a local level in local representatives to provide training and services through an accessible, skilled workforce in regions where HIV infection is highly prevalent. In the U.S., we are working closely with numerous **U.S. AIDS service organizations (ASOs)** to help address healthcare disparities through educational programs and resources that align with the National HIV/AIDS Strategy (NHAS).

To facilitate access in sub-Saharan Africa, and in low-income income countries, the areas of greatest need and least ability to finance healthcare, we instituted an innovative model that utilizes a low-cost supply chain with manufacturing partners. This enabled us to reduce our Access price to US $1.85 per day in specific countries. We have also granted nonexclusive voluntary licenses to two generic manufacturers to supply generic raltegravir in these regions. This is coupled with our commitment to provide local, on-the-ground support, including medical education in sub-Saharan Africa. This initiative was announced in June 2011.

Given the different levels of economic development and national strategies, we have implemented a different approach for middle-income countries to make meaningful improvements in patient access. We are focused on working with governments and with other country stakeholders to develop strategies tailored to each country's HIV access needs. As part of this effort, we have implemented a **differential pricing policy** based on country income and disease burden. We continue to explore the best country-specific models in these regions.

In developed countries, our commitment to addressing patient access needs has not waivered. In the United States, for example, many state **AIDS Drug Assistance Programs (ADAP)** have struggled to meet growing need. Over the last two decades, Merck lowered or froze the price of its antiretrovirals

four times. Since 2010, Merck has worked with Welvista to offer immediate access to no-cost HIV medicines to patients on ADAP waiting lists. We also continue to offer support to eligible patients through Merck's comprehensive **Patient Assistance Programs** and Co-Pay Assistance Program.

Innovation and Collaboration Leads to Results

We constantly strive to discover new ways to apply our expertise, human and financial resources, and market-based solutions to address the complex challenge of patient access. Our strategies are designed to enable us to facilitate access while continuing to develop new medicines. They also help us move beyond the limits of what we can achieve if we work alone.

This desire to redraw the bounds of possibility enabled Merck to pave the way for two successful private-public partnerships that were created in the last decade in some of the countries hardest hit by HIV. Merck has donated its antiretrovirals to the **African Comprehensive HIV/AIDS Partnerships**, and The Merck Company Foundation has committed more than $115 million to both this partnership and the **China-MSD HIV/AIDS Partnership**. By 2010, over 90 percent of people in Botswana in need of HIV treatment were receiving it, compared with 5 percent when the program began in 2000. In the areas served by the partnership in China's Sichuan Province, the number of AIDS patients on treatment increased from 0 to close to 1,500 in just three years.

Merck remains committed to fulfilling our shared responsibility to improve access and to helping the world win the long-term battle against HIV. Continued dedication and strengthened investment from all stakeholders are needed to fully address the evolving challenges of the epidemic, including the multifaceted barriers to access. We look forward to building new partnerships and collaborations to move toward our common goal of achieving greater access to healthcare and continuing the fight against HIV.

INITIATIVES

Despite Merck's efforts to develop and implement effective philanthropic and business strategies to help remove barriers to access, challenges remain because of the complex and multifaceted nature of the problem.

Improving access to HIV medicines requires more than simply making our medicines and vaccines available at reasonable prices. We believe that to truly address—and, ultimately, solve—the issue of access in low- and middle-income markets, the international community must pool its resources and expertise to strengthen healthcare infrastructure, ensure adequate financing for health, and help to build local healthcare capacity through training and support. Pharmaceutical companies alone cannot solve these immense public health problems. Sustainable solutions will come from comprehensive approaches that draw on the expertise of all stakeholders.

For this reason, a key element of Merck's approach to increasing access to HIV medicines is promoting and participating in public-private partnerships with governments, multilateral organizations, community-based organizations, other corporations and nongovernmental organizations (NGOs) to address specific health and development challenges beyond those over which Merck has immediate and direct control. While many include financial or in-kind support, we also seek to leverage our expertise and the skills of our employees to contribute in additional meaningful ways.

Ensuring Access to Our HIV Medicines to U.S. AIDS Drug Assistance Programs (ADAPs)

We have a long history of working closely with leaders from the HIV community to ensure that our approach to pricing our medications is fair and reasonable, balancing Merck's interest in conducting extensive HIV research while supporting broad access to our medicines.

Merck was the first company to provide a price freeze to the unique state U.S. AIDS Drug Assistance Programs (state ADAPs) when, in the late 1990s, they began to suffer a

funding challenge. In 2008, Merck announced a price freeze on ISENTRESS® (raltegravir) for state ADAPs, and in 2010 Merck extended that price freeze of ISENTRESS and that of CRIXIVAN® (indinavir), which was first established in 2003 to eligible state ADAPs, through December 31, 2013. Merck also is providing expanded financial relief to state ADAPs through increased discounts.

Welvista

Through Welvista, Merck provides ISENTRESS and CRIXIVAN to patients on waiting lists for drugs under the ADAP program.

Merck's Patient Assistance Programs (PAPs) in the United States

Merck's commitment to patients' access to its products is reflected in its **SUPPORT™ Program**, which helps answer questions related to insurance coverage and provides free reimbursement support services for patients who have been prescribed ISENTRESS or CRIXIVAN. The SUPPORT Program can also help patients apply for **Merck's Patient Assistance Program (PAP)**, which provides ISENTRESS and CRIXIVAN free of charge to eligible patients who do not have insurance coverage. More information about the SUPPORT Program can be obtained by calling 1-800-850-3430 or visiting **this site**.

Merck's Co-Pay Assistance Program in the United States

In addition to the SUPPORT Program, Merck has a in the U.S. for eligible patients on ISENTRESS. If patients have private insurance and an out-of-pocket cost for ISENTRESS, they may be eligible to receive a savings coupon. The coupon provides savings toward their out-of-pocket costs, up to a maximum of US$400 per prescription (regardless of the number of tablets supplied on the prescription) of ISENTRESS. The coupon can be used up to 12 times prior to the expiration date. Restrictions and Terms and Conditions apply. **Learn more**.

PUBLIC POLICY

Merck actively engages with stakeholders involved in HIV/AIDS outreach and public policy through a number of mechanisms.

In the United States, Merck has established ethnically diverse HIV Community Advisory Boards that include HIV community leaders from across the nation. Merck meets with these boards regularly to discuss new data, clinical trial design and marketing and access strategies. We also meet regularly with the European Community Advisory Board of the European AIDS Treatment Group to discuss similar issues, and we engage with stakeholders in public policy discussions through numerous scientific and policy events and initiatives.

PARTNERSHIPS

Improving access to care requires more than simply making our medicines available and affordable. Collaboration is essential to enhancing access in HIV.

The most important factors for long-term sustainability are strengthening healthcare infrastructure, ensuring adequate financing for health, and helping to build local healthcare capacity through training and support. Public-private partnerships have a critical role to play in this process, drawing on the complementary expertise of all stakeholders—governments, international agencies, community organizations, donors, the private sector, nongovernmental organizations (NGOs), patients and others—to identify the most promising and efficient ways to address the impact of HIV in a variety of resource-limited settings.

In this section, we outline some of the many programs and partnerships Merck supports around the world to help address the challenge of HIV.

Africa

The African Comprehensive HIV/AIDS Partnerships (ACHAP)

In 2000, the Government of Botswana, The Merck Company Foundation/Merck and the Bill & Melinda Gates Foundation established the African Comprehensive HIV/AIDS Partnerships (ACHAP) to support and enhance Botswana's response to the HIV/AIDS epidemic through a comprehensive approach to HIV/AIDS prevention, care, treatment and support. In 2010, The Merck Company Foundation renewed its commitment to ACHAP with an additional grant of $30 million for the period 2010–2014—bringing its total to $86.5 million over 15 years. Merck also agreed to continue the donation of its antiretroviral therapies (ARVs) for the duration of the partnership. By 2010, over 90 percent of people in Botswana in need of treatment were receiving it, compared with 5 percent when the program began in 2000. **Learn more** about ACHAP and progress being made through this collaborative effort.

Keeping HIV-Positive Mothers and Their Babies Healthy: mothers2mothers

Since 2008, Merck has supported **mothers2mothers** (m2m) to facilitate HIV-prevention programs for mothers at prenatal clinics in rural Lesotho. The program aims to reduce the number of babies born with HIV through the prevention of mother-to -child transmission (PMTCT). M2m also develops and implements HIV-skills training for women in HIV management, in order to better serve the community. Since m2m initiated its program in Lesotho, the organization has opened 66 sites, hired 24 site coordinators, trained 86 "Mentor Mothers," enrolled 13,600 patients and fostered 80,900 client interactions.

Educating and Empowering Young People through Soccer

Merck has supported Grassroot Soccer's program in Namibia since 2008. The Football for an HIV Free Generation (F4) program combines outreach programs for youth that foster educational, leadership and life-skills development. The key aims are: (1) to reduce the rate of HIV infection; (2) to engage young people across Namibia as advocates in the fight against HIV, to help them make a positive difference in their communities; and (3) to help boost leadership and increase country-level focus on improving HIV prevention. The Namibia program, which began in 2006, has trained 184 coaches and graduated 11,025 young people.

Eastern Europe/Middle East

Promoting Prevention and Raising Awareness in the Russian Federation

Merck has supported the **Social Partnership Development Fund (SPDF)** in the Russian Federation to expand HIV prevention and community outreach projects. The strategic aim of this fund is to raise awareness of HIV treatment among people living with HIV/AIDS, medical specialists, service providers and healthcare officials. The SPDF has provided web-based updates on HIV treatment and care guidelines, has expanded HIV information on drug registration/availability, and has developed and disseminated materials on HIV treatment in Russian.

Educating and Empowering Young People: U CH00SE (Bulgaria)

Since 2009, Merck has supported the **U Ch00se campaign** in Bulgaria to increase awareness about the prevention and consequences of STDs (mainly HIV/AIDS and HPV) among youth and young adults between the ages of 11 and 26. The campaign aims to teach by disseminating information, encouraging communication to promote key messages, and training peer educators.

Since 2010, the campaign has established an online presence that includes educational information, a blog and other opportunities for dialogue about topics that can be hard to talk about. The campaign also produced a film profiling the youth point of view on the issue of STDs. Additional updates on the program's progress in 2011 are forthcoming.

Asia Pacific

China-MSD HIV/AIDS Partnership

The China-MSD HIV/AIDS Partnership (C-MAP), a collaboration between The Merck Company Foundation and China's Ministry of Health, works toward the comprehensive prevention and treatment of HIV/AIDS in China. Established in 2005 with an initial seven-year, US $30 million commitment from The Merck Company Foundation, the program is the most extensive

HIV/AIDS prevention and treatment initiative to be conducted to date through collaboration between the Chinese government and a foreign company in China. First introduced in three counties in Liangshan Prefecture, Sichuan Province, C-MAP has been extended to another 20 regions and prefectures in Sichuan, reaching a total of 62 project sites. In the areas served by the partnership in China's Sichuan Province, the number of AIDS patients on treatment increased from 0 to close to 1,500 in just three years. **Learn more** about C-MAP and the progress being made through this collaborative effort.

"Reaching Out" to People Living with HIV/AIDS in Malaysia
In 2010, Merck supported the **Malaysian Society for HIV Medicine's (MASHM)** "Reaching Out" program, which is designed to help women, single mothers and injecting drug users (IDU) living with HIV/AIDS in need of psychosocial support and life skills. This support led to MASHM implementing in 2011: (1) workshops for HIV caregivers that will provide updates on the use of new agents and their development for ID specialists focusing on both national and international guidelines; (2) life-supporting skills and psychosocial support to women, pregnant women and single mothers living with HIV; and (3) self-management support to IDUs on HAART (highly active antiretroviral therapy) regimens.

United States

Merck is committed to reducing healthcare disparities and improving access to HIV treatment and care in the United States. As part of this commitment, Merck engages in collaborations to reduce the impact of HIV on those most in need and most at risk. Merck works with leading AIDS service organizations (ASOs) to develop solutions that strengthen access to treatment, care and support for disproportionately affected communities.

The Black Treatment Advocates Network (BTAN)
Black Americans face a severe burden of HIV in the U.S., accounting for almost half (46 percent) of all people living with HIV. Among individuals living with HIV/AIDS in the U.S., Black Americans are less likely to receive HIV treatment and often are the least likely to remain in care.

To address the critical disparity in HIV-treatment outcomes and strengthen the link to care, in 2010 Merck established a collaboration with the Black AIDS Institute (BAI) to launch the Black Treatment Advocates Network (BTAN). BTAN trains, mobilizes and equips teams of treatment advocates to link HIV-positive Black Americans with care, raise science and treatment literacy, and strengthen local and national leadership. The initiative has trained 150+ high-potential advocates and supported access and linkage efforts in high-prevalence communities. BTAN has served more than 70,000 people living with HIV/AIDS and is active in nine high-burden U.S. regions. Through this initiative, Merck and the BAI work together to address disparities in HIV care in Black communities across the United States.

"Everyone Has a Story"
In the United States, women account for more than one-quarter of all new HIV/AIDS diagnoses. Among Black Americans, one in 30 women will receive a positive HIV diagnosis at some point in her lifetime.

To address the disproportionate impact of HIV on Black American women, in 2009 Merck began collaborating with SisterLove, Inc., an Atlanta-based HIV/AIDS service organization, to develop a mini documentary that addresses the unique challenges HIV-positive women of color face. The result was "Everyone Has a Story" (EHAS)—an educational capacity- and skills-building initiative for healthcare professionals (HCPs) and HIV-positive women. EHAS uses video-based storytelling to empower individuals to address stigma, navigate disclosure, build strong relationships with providers and live healthier lives. It also improves cultural competency among HCPs. Since launching EHAS in March 2011, Merck and SisterLove have distributed more than 6,500 workshop guides to community organizations, clinics, universities and international decision-making bodies in high-burden cities across the U.S. and in South Africa. The initiative remains active across the United States.

Treatment Education Training Program
For more than three years, Merck has supported AIDS Project Los Angeles (APLA) to develop and implement a three-day training program that brings together a diverse range of HCPs in Los Angeles, California, and Tucson, Arizona, to learn new information on key topics in HIV treatment and care. This

program helps to reduce racial/ethnic disparities in timely access to HIV primary care and increases the capacity of HCPs to deliver accurate HIV-treatment information to patients.

"You Are Not Alone"
With Merck's support, Gay Men's Health Crisis (GMHC), an internationally recognized ASO, developed a social marketing campaign—"You Are Not Alone"—to raise awareness about the importance of medical care, treatment and adherence. The campaign targets the most affected groups in the U.S., including young men of color who have sex with men, women of color and Latinos. It provides critical information to help HIV-positive individuals access treatment, health information and healthcare services. Together, Merck and GMHC have distributed more than 70,000 brochures to the HIV community.

Sharing Stories, Creating Hope (Compartiendo Historias, Construyendo Esperanza)
Hispanics/Latinos make up 16 percent of the total U.S. population yet account for 20 percent of all new HIV cases. Hispanics/Latinos also experience disproportionately high of rates of delayed testing, diagnosis and entry into care.

To address these disparities, in 2011 the Latino Commission on AIDS and Merck came together to develop Sharing Stories, Creating Hope, a groundbreaking multimedia educational initiative. Set to launch in 2012, this bilingual initiative will support capacity-building efforts across the U.S. to enhance interactions between Latinos/Hispanics living with HIV and their healthcare providers, and to support access and adherence. The videos will feature interviews of patients and providers discussing strategies to overcome barriers to initiating and sticking with care and treatment.

The Quilt in the Capitol and the "Call My Name" National Tour
In 2012, Merck began collaborating with the NAMES Project to bring the AIDS Memorial Quilt to the International AIDS Conference in Washington, D.C., and to support a four-month "Call My Name" national tour. The "Call My Name" tour uses quilting workshops to raise awareness of HIV in disproportionately impacted communities and to commemorate lives lost to the epidemic. Merck's support of Call My Name and the Quilt in the Capitol effort are part of its long-standing commitment to reduce health disparities in HIV treatment and care.

South America

Vivo Positivo and Accion Solidaria
In Chile and Venezuela, Merck has supported the ASOs **Vivo Positivo** and **Accion Solidaria** to train HIV counselors; help people living with HIV/AIDS (PLWHA) better manage care, increase adherence and improve quality of life.

Fundacion Huesped/IMLAS
The media has a critical role to play in raising awareness of HIV/AIDS. Merck has supported the **Latin America Media Partnership on HIV/AIDS** (Iniciativa de Medios Latinoamericanos sobre el SIDA or (IMLAS in Spanish)) to encourage a regional response to HIV/AIDS; to persuade the media to address HIV-related stigma and discrimination, and to promote HIV prevention and awareness across Latin America.

The IMLAS program PASION POR LA VIDA / PAIXAO PELA VIDA ("Passion for Life") is the first regional media effort to inspire and empower people to help stem the spread of HIV/AIDS. Profiling courageous individuals living with HIV across the region, the campaign aims to put a face on the region's HIV/AIDS epidemic, encourage the audiences to become better informed about HIV/AIDS, and reduce HIV-related stigma. The campaign's message of hope and positive action is broadcast in 13 nations by members of IMLAS—a regional partnership of the Global Media AIDS Initiative (GMAI).

Instituto Vida Nova
In response to the epidemic and in support of the Brazilian government's well-recognized commitment to address HIV/AIDS, Merck provided financial support to HIV programs developed by local nongovernmental organizations (NGOs).

For example, Merck supports Instituto Vida Nova (IVN), an organization whose mission is to improve quality of life for HIV/AIDS patients and their families in the city of São Paulo and to help protect skilled home-care professionals who are vulnerable to infection through their work. IVN provides healthcare and social development programs to 602 people living with HIV/AIDS in the city.

HIV RESEARCH

Merck has had an intensive, broad-based HIV clinical research program since 1985 that has sought to address both treatment and prevention.

In addition to our own research efforts, we also have entered into collaborations with other researchers and scientific organizations to help accelerate the search for new treatments and possible cures.

Timeline of Merck's HIV Research Efforts

- In 1989 Merck scientists established the role of protease in the HIV life cycle, were the first to publish the crystal structure of HIV protease shortly thereafter, and were among the first to discover and develop medicines for the treatment of HIV
- In 1996 Merck introduced CRIXIVAN® (indinavir), a protease inhibitor. Merck also developed efavirenz, a non-nucleoside reverse transcriptase inhibitor
- Beginning in 1999, Merck sought registration for efavirenz as STOCRIN® in many countries around the world
- Merck's work in the early phase of HIV research played an important role in collaboration with others in defining the principles for combination antiretroviral (ARV) treatment to suppress the virus to undetectable levels
- In 2006: ,a partnership between Merck, Bristol-Myers Squibb and Gilead to develop a once-daily, single-tablet regimen HIV treatment resulted in the approval in the U.S. of ATRIPLA® (tenofovir, emtricitabine, efavirenz). ATRIPLA is marketed by Bristol-Myers Squibb and Gilead in the United States, Canada and Europe. Merck is working to register and distribute ATRIPLA in many developing countries around the world
- In 2007, Merck's efforts to address the growing problem of multidrug resistance led to the approval in the U.S. of ISENTRESS® (raltegravir), the first integrase inhibitor and the first ARV treatment to target the integrase enzyme, one of the components the HIV virus needs for replication. ISENTRESS offers patients a different way to target the HIV virus as part of a treatment regimen
- Merck continues to focus on comprehensive research and development that targets HIV, recognizing the need for new methods to address the epidemic. Merck's current R&D work in HIV includes basic research on HIV neutralizing antibodies, programs to develop novel HIV-prevention technologies, new HIV antiretroviral medicines and new drugs targeting HIV latency

Preventing HIV through Microbicides

To help find new ways to prevent and treat HIV/AIDS, in 2008 Merck granted the International Partnership for Microbicides (IPM) a non-royalty–bearing, nonexclusive license to develop, manufacture and distribute a novel ARV compound (L'644) for use as a vaginal microbicide to help protect women in developing countries. The compound, the fourth we have licensed to IPM, is a member of a class of ARV molecules known as fusion inhibitors, which inhibit HIV-infection by preventing the virus from fusing with the surface of target cells—an early step in the HIV infection process—potentially representing a novel way to block infection. Merck is also collaborating with IPM to advance early-stage product development research efforts. This recent agreement follows a similar IPM-Merck agreement announced in 2005.

"Merck deserves recognition for its exemplary commitment to HIV-prevention research. This arrangement helps IPM pursue development of compounds that target HIV at many points in the virus life cycle. We're working toward the day when millions of women around the world will have access to safe and effective microbicides—and partnerships like this will help us get there."

Dr. Zeda Rosenberg
CEO of IPM

Stakeholder Engagement to Advance Merck's R&D Efforts

Merck regularly communicates, interacts and collaborates openly with scientific leaders in the HIV/AIDS field to advance science. In the United States, for more than a decade, Merck has had an established physician advisory board that includes international and national scientific leaders. This advisory board meets with Merck regularly to discuss and advise Merck on HIV research and development strategy, emerging scientific issues and clinical program design. At the international level, Merck has also established a similar advisory board with international scientific and clinical leaders worldwide to gain input on emerging challenges in HIV care in developing countries.

New Research Efforts to Eradicate HIV

In July 2011, Merck announced that several company researchers will participate in two new collaborative efforts led by the prominent academic institutions of the University of North Carolina (UNC) Chapel Hill and the University of California San Francisco (UCSF) to develop new approaches towards eradicating HIV, the virus that causes AIDS. UNC, researchers from nine additional U.S. universities and Merck scientists are studying HIV latency and identifying ways to purge persistent infection of the virus from the body. Separately, researchers at UCSF are working with an international team of academic, government and Merck scientists on a five-year research effort to define HIV's reservoirs, better understand the reservoirs and test potential treatments. The National Institute of Allergy and Infectious Diseases (NIAID), part of the NIH, is the primary funding organization for both of these research efforts. Merck does not receive any funding for participation in either effort.

"Collaboration has been the hallmark of much of the progress made against HIV since the virus was first identified 30 years ago. Continued collaboration is absolutely essential to better understand HIV reservoirs and identify potential approaches to the daunting challenge of eradicating HIV. Merck is honored and excited to participate in these important new undertakings."

Daria Hazuda, Ph.D.
Vice President, Merck Research Laboratories

PEDIATRIC TREATMENTS FOR HIV

As part of the company's commitment to fight HIV/AIDS, Merck has conducted extensive research and development efforts to bring forth pediatric formulations for its ARVs.

Our commitment extends to ongoing collaborations to help improve access to ARV treatment for children living with HIV in resource-limited settings.

Extensive R&D Efforts for Pediatric Formulations for Merck ARVs ISENTRESS

In 2007, Merck began collaborating with NIAID, the National Institute of Child Health and Human Development (NICHD), and the International Maternal, Pediatric, Adolescent AIDS Clinical Trials (IMPAACT) Group, to conduct a Phase I/II, multicenter, open-label, noncomparative study to evaluate the safety, tolerability, pharmacokinetics and antiretroviral activity of ISENTRESS® (raltegravir) in children and adolescents: IMPAACT P1066. The trial involves HIV-infected children ranging from 4 weeks to 18 years of age in the United States, Latin America and Africa.

This is a study of three formulations: the adult tablet, a chewable tablet and an investigational granule formulation for oral suspension. The study is designed to collect intensive pharmacokinetics and short-term safety data in order to make a dose selection, and also provide data on safety and efficacy at the selected dose with chronic use over 48 weeks. There is a protocol extension to five years. The study was initiated in older children and has sequentially enrolled younger patients.

On the basis of results from this ongoing study (IMPAACT P1066), in December Merck gained FDA approval of ISENTRESS for use in children 2 to 18 years of age who weigh at least 10 kg (the chewable formulation for ages 2 to 11 years (based on age and weight) and the film-coated tablet for ages 6 to 18). Through this study, a second pediatric formulation (oral granules for suspension) in children less than 2 years of age is being evaluated.

Also in collaboration with IMPAACT, one study in neonates is ongoing (examining raltegravir levels in infants born to mothers who have taken raltegravir in pregnancy) and another study of active raltegravir dosing to neonates is in development, which aims to define the safety and appropriate dose for neonates at risk for acquiring HIV infection. Merck is dedicated to continuing the work necessary to obtain regulatory approval for the oral granules for suspension pediatric formulation of ISENTRESS.

STOCRIN® (efavirenz) is indicated for the treatment of HIV-1 infection and has pediatric indications for patients ages 3 to 17 years in many countries, particularly in the developing world. For many of the countries3 for which Merck has the right to distribute STOCRIN under our agreement with Bristol-Myers Squibb, we are currently marketing four formulations: STOCRIN oral solution, STOCRIN 50mg, STOCRIN 200mg and STOCRIN 600mg tablets.

CRIXIVAN® (indinavir) is indicated for the treatment of HIV-1 infection and has pediatric indications in some countries. CRIXIVAN has not been evaluated in children under 3 years of age.

Working to Improve Access in Resource-Limited Settings

Merck is also working in partnership with the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) Partnership for Pediatric AIDS Treatment to identify scientific and technical solutions to improve access to ARV treatment for children living with HIV in resource-limited settings. Participating in this effort are the U.S. government, multilateral organizations such as the United Nations Children's Fund (UNICEF) and the United Nations Joint Programme on HIV/AIDS (UNAIDS), research-based pharmaceutical companies and generic-drug companies. The partners have committed to work toward identifying scientific obstacles to treatment, share best practices and take concrete, practical steps to address barriers to access.

HIV VACCINES

Merck began research into an HIV vaccine shortly after the virus was identified in the mid-1980s and has been actively involved in HIV vaccine R&D since that time.

Merck's research effort has targeted both antibody-based and cellular-immune-based vaccine approaches to preventing HIV infection. In 2005, Merck and its partners began a large trial to test the efficacy of a Merck developmental cellular-immune-based vaccine. The study, known as the STEP trial, was cosponsored with the National Institutes of Health (NIH) and the HIV Vaccine Trials Network (HVTN) and designed to evaluate whether the vaccine prevented HIV infection; and whether the vaccine reduced virus levels in those who developed infection. In an interim analysis, the vaccine did not reduce the incidence of infection nor did it reduce virus levels.

In September 2007, Merck announced that its vaccination in a Phase II clinical trial of the company's investigational HIV vaccine (V520) was being discontinued because the vaccine was not effective.

Merck continues to work with the research community to understand the study results of the STEP trial and its implications for the field of AIDS-vaccine R&D. Merck scientists continue to research antibody-based approaches and have been studying novel immunogen designs based on essential and conserved regions of the HIV envelope glycoprotein. Merck has recently established collaborative research projects with academic investigators to advance promising antibody-based approaches for an HIV-1 vaccine.

ANTIRETROVIRAL REGISTRATION

Merck is committed to pursuing rapid registration of our antiretrovirals (ARVs), including in those countries most affected by HIV/AIDS.

Currently, Merck ARVs are registered or available through import waiver in many countries. Since the first approval in 2007, ISENTRESS® (raltegravir) has received regulatory approval in more than 90 countries for use in treatment-experienced adult patients infected with HIV-1, and in 47 countries for use in treatment-naïve adult patients infected with HIV-1. Merck is in the process of filing ISENTRESS in additional countries around the world.

Details of registration and availability of our four ARVs are available through the links below:

- **ATRIPLA®** (tenofir, emtricitabine, efavirenz)
- **CRIXIVAN®** (indinavir sulfate)
- **ISENTRESS** (raltegravir)
- **STOCRIN®** (efavirenz)

World Health Organization (WHO) Prequalification

STOCRIN, CRIXIVAN and ATRIPLA have received World Health Organization (WHO) prequalification. Merck is committed to working with the WHO for the prequalification of ISENTRESS. WHO prequalification verifies that medicines meet the quality, safety and efficacy requirements of UN agencies, including UNICEF and the Pan American Health Organization—an important step toward providing global access.

HIV PRICING POLICIES

Merck's differential-pricing policy is part of its commitment to addressing HIV, with the goal of ensuring that its HIV antiretroviral (ARV) medicines reach as many of those in need as possible.

Pricing Policy for HIV Medicines in the Developing World

Our differential-pricing program not only facilitates access, but it also helps us sustain our investment in clinical and medical education programs in the countries with the greatest disease burden while maintaining an incentive to develop and market medicines in countries with a lower HIV-disease burden and a greater ability to finance healthcare.

ISENTRESS, STOCRIN, CRIXIVAN

Merck offers its lowest Access price for its HIV medicines to all countries in sub-Saharan Africa and Low-Income countries, as defined by the World Bank. As of July 1, 2011, the Access prices for Merck's HIV medicines in sub-Saharan Africa and Low-Income countries for eligible customers[1] are:

Countries classified as Low-Middle Income and Upper-Middle Income[2] by the World Bank are eligible for prices that are discounted from those in developed, high-income countries. These prices will vary based on country income and disease burden, and will be negotiated with each government.

For high-income countries, Merck will make ISENTRESS® (raltegravir) available at competitive prices that take into account the innovation and value that ISENTRESS represents.

ATRIPLA

Merck sells ATRIPLA® (tenofovir, emtricitabine, efavirenz) at US$1.68 per day, or US$613 per year in 98 access countries as defined by our agreement with Gilead.

Antiretroviral (ARV) Pricing

Merck is committed to reviewing the prices of our ARVs based on efficiencies in manufacturing and supply, and/or reductions in the costs of active ingredients.

Since 2000, Merck has lowered the Access price of STOCRIN® (efavirenz) by more than 95 percent from an introductory price of US$10/day in 1998, to US $0.65/day. Since 1996, Merck has lowered the Access price of CRIXIVAN® (indinavir) by 84 percent, from an introductory price of US $12/day to US $1.64/day.

[1] Customers eligible for public sector Access pricing in sub-Saharan Africa and Low-Income countries will include: governments and programs fully funded by governments and/or by multi- and bi-lateral donors (e.g., the Global Fund, PEPFAR or UNITAID), UN System Organizations, NGOs and other noncommercial providers of HIV treatment in sub-Saharan Africa and World Bank defined Low-Income countries. Merck offers these products on a Delivered Duty Unpaid (DDU), Carriage and Insurance Paid (CIP) or Carriage Paid To (CPT) airport-of-destination (Incoterms, 2000) basis. Additional costs may include freight, insurance, customs handling, taxes and duties.

[2] Customers eligible for public sector pricing in Low-Middle and Upper-Middle Income countries will include: governments and programs fully funded by governments and/or by multi- and bi-lateral donors (e.g., the Global Fund, PEPFAR or UNITAID), UN System Organizations and NGOs. Low- and Middle-Income countries that are members of the European Union are not eligible for pricing under this access program.

HIV PRICING

Drug Name	Daily Dose	Pricing US$ ppy (unit)
STOCRIN ® (efavirenz)		
50mg tablet	4 (200 mg)	169 (0.12)
200mg tablet	3	394 (0.36)
600mg tablet	1	237 (0.65)
30mg/ml suspension (bottle)	9 ml	310 (0.094)
30mg/ml suspension (bottle)	12 ml	413 (0.094)
CRIXIVAN ® (indinavir)		
400mg cap	4	394 (0.27)
ISENTRESS ® (raltegravir)		
400mg tab	2	675 (0.925)

HIV SUPPLY CHAIN

Merck continually looks for ways to reduce the cost of its antiretrovirals (ARVs) for people living in the world's poorest countries and those hardest hit by the epidemic.

One way is to work with external manufacturers and suppliers to achieve incremental efficiencies. For ISENTRESS® (raltegravir), Merck has established a low-cost supply chain with generic partners for commercialization in all Low-Income countries and all sub-Saharan Africa. This supply chain is being registered in these countries. With the implementation of this supply chain, we have been able to reduce the price of ISENTRESS to US $1.85 per day in these countries. We are committed to reviewing this price regularly.

In June 2011, Merck granted two nonexclusive licenses to two Indian generic manufacturers, Emcure Pharmaceuticals Ltd. and Matrix Laboratories Ltd., for the manufacture and commercialization of raltegravir in 60 Low-Income and sub-Saharan African countries. We have also granted royalty-free licenses for efavirenz to six South African generic manufacturers.

Manufacturers to whom Merck has granted a royalty-free voluntary license for efavirenz include:

- Emcure Pharmaceuticals S. Africa and Arrow Pharma S. Africa—joint license granted in 2011
- Sonke Pharmaceuticals—license granted in 2009
- Aspen Pharmacare—license granted in 2008
- Aurobindo Pharma—license granted in 2008
- Cipla Medpro—license granted in 2008
- Adcock Ingram Healthcare—license granted in 2007

Patent Pool for HIV Medicines

Merck, in principle, supports the objectives of the Medicines Patent Pool Foundation for expanding access to HIV medicines in the developing world. Merck has demonstrated its commitment to improved access to HIV medicines through long-standing efforts over many years, including differential pricing, voluntary licensing, public-private partnerships, philanthropic programs, and continued research and development efforts in HIV.

Given the current low demand for raltegravir, its position in treatment guidelines in the developing world, the need for ongoing clinical research to better define how it is best used in the developing world, the need for medical education and adequate monitoring tools, such as routine viral load monitoring, to ensure its appropriate use, Merck does not think that the Medicines Patent Pool presents the most appropriate tool to increase access to raltegravir in the developing world at this point in time.

While we continue to monitor and assess the Medicines Patent Pool proposal, Merck's immediate focus is on implementing our access strategy for ISENTRESS in Low-Income countries and sub-Saharan Africa as part of our ongoing efforts to further enhance global access to our HIV medicines.

Merck remains willing to meet with the Medicines Patent Pool Foundation to continue to discuss developments with the patent pool.

Compulsory Licensing

Merck understands that access to medicines is a particularly complex issue in many developing countries and respects that international trade agreements—especially the World Trade Organization's TRIPs agreement (trade-related aspects of intellectual property rights) and subsequent Declaration on TRIPs and Public Health agreements—provide countries with the authority, in limited circumstances, to use compulsory licensing. In the case of medicines, we further respect that compulsory licenses may be issued, under limited and specified circumstances, to meet a health crisis or emergency.

However, both the letter and spirit of international trade rules suggest that such authority should be used only in the most extraordinary and limited circumstances in order to support all

forms of innovation around the world. Merck will work vigorously with governments and other stakeholders in the developing world to meet the health needs of patients and increase access to its medicines.

For more information on Merck's public policy position on compulsory licensing, **click here**.

VACCINES

Vaccines are one of the greatest public health success stories of the 20th century.

Vaccines have resulted in the global eradication of smallpox and the elimination of polio from the Western Hemisphere and much of Asia. In addition, vaccines for diseases like measles, pertussis and diphtheria have dramatically reduced childhood mortality worldwide. However, because of gaps in the healthcare infrastructure and workforce of the developing world, preventive measures such as immunization programs are both difficult to deliver and particularly critical to the health and economies of developing countries. Merck continues to make progress in preventing disease and saving lives by developing innovative vaccines, working in partnerships to make them accessible to those who need them around the world, and helping to build capacity and address implementation challenges in developing countries.

In order to do this, Merck continues to develop novel business strategies and creative partnerships to address the access challenges in vaccines in resource-constrained settings. For instance, in September 2011, Merck announced its plans to contribute $3 million over three years to the Pink Ribbon-Red Ribbon™ to address both cervical and breast cancers in sub-Saharan African nations. The Pink Ribbon-Red Ribbon is a historic initiative that brings together public and private partners, including Susan G. Komen for the Cure, the George W. Bush Institute, the President's Emergency Plan for AIDS Relief (PEPFAR), UNAIDS, the U.S. government and and other corporate organizations. **Learn more** about the Pink Ribbon-Red Ribbon initiative.

Merck continues to pursue a systematic approach to expanding access to ROTATEQ® (Rotavirus Vaccine, Live, Oral, Pentavalent) and GARDASIL® [Human Papillomavirus Quadrivalent (Types 6, 11, 16, and 18) Vaccine, Recombinant], including a number of initiatives to study the public health impact of routine vaccination programs and to accelerate the introduction of vaccines in resource-poor countries. The faster we improve access to vaccines like these, the more lives we can impact.

Merck actively engages with a broad set of stakeholders to improve access to vaccines and immunizations. We help inform the vaccine policy environment through stakeholder engagement with important international organizations such as the World Health Organization (WHO), the GAVI Alliance Board and UNICEF. Additionally, Merck engages stakeholders from regional organizations, such as the Pan American Health Organization (PAHO), and from national organizations, contributing to the development and implementation of regional and national immunization programs. Merck also participates with other industry trade groups, such as the Pharmaceutical Research and Manufacturers of America (PhRMA) and the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA).

PERFORMANCE & COMMITMENTS

Merck is committed to:

- Engaging in innovative Research and Development (R&D) to provide vaccines that address vital global health needs
- Reducing the gap between vaccine availability in developed countries and the introduction of vaccines in the developing world through the timely registration and introduction of our vaccines
- Developing creative partnerships to address the full range of factors affecting access to our vaccines in resource-constrained settings including those to increase manufacturing capacity, implementation challenges and healthcare capacity and infrastructure

VACCINE RESEARCH AND DEVELOPMENT

Merck conducts innovative research and development to provide vaccines that address vital unmet and emerging global health needs.

Merck has developed many of the world's vaccines for children, adolescents and adults. Merck supports the Millennium Development Goal of reducing childhood mortality (MDG 4) through our efforts to address two main causes of death from preventable or treatable disease in children under five in the developing world; diarrheal and pneumococcal disease.[1] In addition, some of the vaccines being researched by Merck scientists target diseases that are particularly prevalent in the developing world. This includes research programs and collaborations for important diseases such as HIV, malaria and dengue.

Merck looks to establish new business models and partnerships for research and development. A case in point is the **MSD-Wellcome Trust Hilleman Laboratories**. Established in 2009, it is the first-of-its-kind research and development joint venture with a not-for-profit mission to focus on developing affordable vaccines to prevent diseases that commonly affect low-income countries. In 2011, Hilleman Laboratories announced that its first project would be a feasibility study into how new technologies might be used to develop a rotavirus vaccine designed specifically with the needs of developing countries in mind.

[1] UNICEF: Progress for Children Report, 2010

ACCESS TO VACCINES

Merck is committed to registering our vaccines worldwide, quickly and transparently—including in developing countries and all countries in which we conduct clinical trials.

Registration & Prequalification

GARDASIL® [Human Papillomavirus Quadrivalent (Types 6, 11, 16, and 18)] is currently registered in 125 countries, and ROTATEQ® (rotavirus vaccine, live, oral, pentavalent) is registered in more than 100 countries. In addition to registration, World Health Organization (WHO) prequalification is an important step in Merck's access efforts, signifying that vaccines meet the quality, safety and efficacy requirements of UN agencies, including those of UNICEF and the Pan American Health Organization (PAHO). Merck received WHO prequalification for ROTATEQ in October 2008, MMR® II (Measles, Mumps, and Rubella Virus Vaccine Live) in December 2008, and GARDASIL in May 2009.

Pricing

In the developing world, Merck offers ROTATEQ and GARDASIL at an access price that is significantly less than the price of these vaccines in developed markets.

The access price is exclusive to the public sectors of Global Alliance for Vaccines and Immunization (GAVI)-eligible countries, meeting the needs of the developing world by facilitating access to these innovative vaccines in the poorest countries, while making sure they remain affordable and sustainable in the long term. We believe that our pricing approach contributes to wider access to our vaccines, while taking into account our need to continue investing in vaccine research, development and production. For more developed, middle-income countries, Merck provides our vaccines at tiered prices in relation to a country's ability to pay.

In April 2012, GAVI announced that eligible countries would be able to apply for funding to allow for broader access to HPV vaccines. Merck supports continued efforts to increase access to HPV vaccines and continues to work with the GAVI Alliance and other partners to evaluate what can be done to increase long-term sustainable access in GAVI-eligible countries.

In addition, we continue to look for novel ways to further reduce the cost of our vaccines in developing countries. An important approach is to pursue manufacturing efficiencies and explore potential partnerships with low-cost manufacturers to bring down the cost of the vaccine.

Merck has a long history of progress in this area. Our Hepatitis B license of technology to manufacturers in China dates back to the 1990's has resulted in over 100 million doses of recombinant Hepatitis B vaccine being produced by our collaborators each year to address the public health burden of this Hepatitis B in China.

In August 2011, Merck announced a new agreement to work with the Serum Institute of India Limited, an Indian company, to develop and commercialize a pneumococcal conjugate vaccine (PCV) for use in emerging and developing countries.

ROTAVIRUS

Merck is pursuing multiple approaches to enable broad use of ROTATEQ® (rotavirus vaccine, live, oral, pentavalent) across income levels.

Since 2006, ROTATEQ has been registered and approved in more than 100 countries, with more than 71 million doses distributed worldwide. In 2012, Rwanda will become the first African country to introduce ROTATEQ through a national immunization program, and represents a new GAVI-eligible country to introduce the vaccine.

In 2006, Merck introduced ROTATEQ in Nicaragua through a joint program with the Nicaraguan Health Ministry. This initiative marked the first time there was access to a vaccine in the public sector of a developing country in the same year that it was first licensed in a developed country. This program completed in 2009 and achieved an estimated 94 percent vaccine coverage (percent receiving third dose of ROTATEQ) among Nicaraguan infants. In March 2010, the immunization program was transitioned to GAVI funding. The significant public health impact of the introduction and widespread use of ROTATEQ in this program was demonstrated through a case-control study of the effectiveness of vaccination. Over a two year period, three doses of Merck's rotavirus vaccine reduced the risk of hospitalization or emergency department visits for severe rotavirus disease by 76 percent for community and hospital visits combined. The vaccine also demonstrated high vaccine effectiveness (87 percent) against severe disease among children younger than 12 months of age at the time of onset of acute disease. **Learn more** about the joint program in Nicaragua.

In 2009, Merck, in partnership with PATH and other organizations also completed clinical trials evaluating the safety and efficacy of ROTATEQ in Bangladesh, Ghana, Kenya, Mali and Vietnam. Trials at all sites in Africa and Asia involved more than 7,500 infants, and the data were published in the August 2010 issue of *The Lancet*.

International organizations such as WHO, GAVI and the Gates Foundation have recognized the importance of rotavirus vaccination. The Strategic Advisory Group of Experts, the principle advisory group to the WHO for vaccines and immunization, has recommended the inclusion of rotavirus vaccination in all national immunization programs, and GAVI and other stakeholders are working to make rotavirus vaccines available in the poorest countries of the world.

CERVICAL CANCER

Merck has a long-standing commitment to help improve access to GARDASIL® [Human Papillomavirus Quadrivalent (Types 6, 11, 16, and 18) Vaccine, Recombinant] in developing countries, where more than 85 percent of the world's cervical cancer cases occur.

In September 2011, Merck announced its plans to contribute $3 million over three years to Pink Ribbon-Red Ribbon™, to address both cervical and breast cancer in sub-Saharan African nations. Pink Ribbon-Red Ribbon is a historic initiative that brings together public and private sector partners including Susan G. Komen for the Cure, the George W. Bush Institute, the President's Emergency Plan for AIDS Relief (PEPFAR), UNAIDS, the U.S. government and other corporate organizations. Through this three-year commitment, Merck will work with Susan G. Komen for the Cure to support the initiative to raise awareness about the burden of breast and cervical cancer, mobilize additional partners and work towards increased access to cervical cancer screening, treatment for women and HPV vaccination of young girls in sub-Saharan Africa.

In 2009, Merck and QIAGEN N.V., a Netherlands holding company and the leading global provider of sample and assay technologies, began to collaborate on a new program to increase access to human papillomavirus (HPV) vaccination and HPV DNA testing in some of the most resource-poor areas of the world. This initiative marks the first time a vaccine manufacturer and a molecular diagnostics company are collaborating to address the burden of cervical cancer in one comprehensive approach. As part of the collaboration, Merck intends to provide, for free up to 5 million doses of GARDASIL, and QIAGEN intends to add to its existing 1 million tests donation program by providing HPV DNA tests to screen an additional 500,000 women. In April 2011, the Government of Rwanda, along with Merck and QIAGEN, announced that Rwanda would be the first recipient of this collaborative effort and the first GAVI-eligible country to implement a comprehensive program that incorporates HPV vaccination and HPV DNA testing. Additionally, and as part of the collaboration between Merck and QIAGEN, an agreement has been signed with Tanzania to provide doses of GARDASIL at no cost to Tanzania to support a phased launch for their HPV vaccination program.

Merck also partnered with the Government of Bhutan and the Australian Cervical Cancer Foundation (ACCF) to initiate a six-year program aimed at reducing incidence of cervical cancer in the country. Through this partnership, announced in May 2010, Bhutan became the first developing nation in the world to implement a national cervical cancer vaccination program. Led by Her Majesty the Royal Grandmother Ashi Kesang Choeden Wangchuck and the Bhutan Ministry of Health, the first year of the program provided an opportunity for appropriate girls and young women between the ages of 12 and 18 to be vaccinated with GARDASIL, and achieved an approximately 90 percent vaccination rate for all three doses, according to the Bhutan Ministry of Health. In subsequent years, the program continues to provide an opportunity for appropriate 12-year- old girls to be vaccinated with GARDASIL. The Bhutan HPV vaccine program is serving as a model for other developing countries that aspire to implement national cervical cancer vaccination programs.

Additionally, Merck partnered with the international nonprofit organization PATH to provide GARDASIL for the conduct of HPV vaccine demonstration projects in Peru, Vietnam and India. GARDASIL was provided to vaccinate approximately 30,000 appropriate girls participating in HPV Vaccines: Evidence for Impact demonstration projects. The overall initiative was designed to strengthen the capacity of developing countries to prevent cervical cancer by generating and providing necessary evidence for public sector introductions of HPV vaccines, informing global advocacy efforts, and providing analyses to help accelerate access to HPV vaccines. The projects suggest that high coverage with HPV vaccine can be achieved through various delivery strategies in the countries studied.

Through the charitable GARDASIL Access Program, Merck pledged to donate at least 3 million doses of GARDASIL for use in smaller-scale HPV vaccination projects in eligible lowest-income countries around the world. The program enables organizations and institutions to gain operational experience designing and implementing HPV vaccination projects, with the goal of supporting the development of successful child and adolescent immunization models. The program accommodates proposals from applicants to design and implement smaller-scale HPV vaccination projects rather than nationwide programs. The operational experiences and lessons learned by participants in the program will be disseminated in an effort to contribute to the public knowledge base on HPV vaccine access and child/adolescent immunization models in lowest-income countries. **Learn more** about the GARDASIL Access Program.

MERCK FOR MOTHERS

It is estimated that 287,000 women lose their lives every year during pregnancy and childbirth.

That translates to approximately one death every two minutes. In an era with so much innovation across all areas of medicine and healthcare, these statistics are both staggering and unacceptable.

In September 2011, we joined the global effort to reduce maternal mortality by launching **Merck for Mothers**. Building on our legacy of tackling urgent global health challenges such as river blindness, HIV/AIDS and hepatitis, Merck for Mothers aims to create a world where no woman has to die giving life. It is a 10-year commitment to bring the issue of maternal mortality to the forefront of global consciousness, develop new technologies and speed lifesaving solutions to women across the globe. While substantial progress has been made in reducing maternal mortality globally in the past 20 years, we are still losing too many mothers, and more needs to be done.

Merck for Mothers is mobilizing the company's science and business expertise—in addition to our financial and human resources—to accelerate progress in saving women's lives around the world. We are focusing on the two leading causes of maternal deaths—postpartum hemorrhage and preeclampsia—as well as on family planning, which is known to play an important role in reducing maternal mortality.

The initiative aims to help governments reach targets 5A and 5B of the UN Millennium Development Goals (MDGs), which call for the reduction of the global maternal mortality rate by 75 percent and universal access to reproductive health by 2015, respectively. Regrettably, achievement of MDG 5 is lagging furthest behind that of all other MDGs.

The Merck for Mothers strategy emerged from consultations with hundreds of global health experts, who helped ensure that our approach was informed, comprehensive and complementary to maternal health efforts already under way.

In its first year, Merck for Mothers has established partnerships with governments, multilateral agencies, NGOs, businesses, physicians and researchers—all dedicated to reducing maternal mortality.

The initiative focuses on three main areas: access to proven solutions, product innovation, and awareness and advocacy.

Access to Proven Solutions

In the next decade, it is estimated that nearly 3 million women may die from complications of pregnancy and childbirth. The majority of these maternal deaths are preventable. While the medical solutions are known, the challenge is making sure that women have access to these solutions when they need them. That is why Merck for Mothers is working with governments and global health experts to develop innovative programs in regions of the world with high numbers of maternal deaths.

This spring, Merck for Mothers joined forces with the U.S. government on an ambitious initiative to aggressively reduce maternal mortality in select districts of Uganda and Zambia. "Saving Mothers, Giving Life" is a new five-year public-private partnership that also includes the American College of Obstetricians and Gynecologists, the Government of Norway, and the advocacy organization Every Mother Counts. Merck for Mothers is the management arm, or secretariat, for the initiative, helping to guide its strategic direction, support on-the-ground program implementation and evaluation efforts, and raise public awareness about the issue of maternal mortality.

"I am very pleased that the United States will be a part of the "Saving Mothers, Giving Life" partnership, along with Merck for Mothers, the Norwegian Ministry of Foreign Affairs, Every Mother Counts, and the American College of Obstetricians and Gynecologists. We're not focusing on a single intervention, but on strengthening health systems. I think back to that day when I had my daughter and how fortunate I was. But surviving childbirth and growing up healthy should not be a matter of luck, or where you live, or how much money you have. It should be a fact for every woman, everywhere."

Hillary Rodham Clinton
U.S. Secretary of State

Product Innovation

With Merck for Mothers, we have set out to learn how we can apply our long-standing experience in innovative product development to resource-limited settings. In partnership with PATH, a leader in health technology, Merck for Mothers is evaluating more than 40 maternal health solutions that have the potential to make a significant impact in saving women's lives. Our scientists hope to identify the three to five most promising prevention, diagnostic, and treatment innovations by year's end, and then develop a strategy to get them into the hands of healthcare workers as effectively and efficiently as possible.

Awareness and Advocacy

When a mother dies, the ripple effect on families and communities can echo for generations. In fact, her newborn is much less likely to see a second birthday. Her other children are many times more likely to die and many times less likely to attend school. Maternal mortality is a complex problem that will take governments, private health professionals and citizens to solve. In order to keep achievement of MDG 5 within reach, it is critical that governments around the world—including the U.S. government—recognize the value of saving women's lives and make this issue a healthcare priority.

WOMEN'S HEALTH

The private sector has an important role to play in contributing to the achievement of the United Nations Millennium Development Goals regarding women's health.

The fifth Millennium Development Goal, Improve Maternal Health, sets a target of reducing maternal mortality (Goal 5a) and achieving universal access to reproductive health (Goal 5b) by 2015, both major contributors to the overall health of women, families and society. While progress has been made, the rates of maternal mortality remain high in many countries and access to modern contraceptive methods remains limited, especially among the poorest and least-educated women.

Enabling couples to determine whether, when and how often to have children is vital to helping achieve safe motherhood, healthy families and healthy communities. Voluntary family planning helps protect the health of women by reducing high-risk pregnancies and helps protect the health of children and mothers by allowing sufficient time between pregnancies. Research has shown that appropriately spacing pregnancies helps improve mother and child survival rates and reduces the risk of preterm birth. The use of family planning methods can also reduce the number of unsafe abortions and associated complications.

Access to modern contraceptives is an important aspect of family planning. At Merck, our multifaceted approach supports efforts to improve access to family planning services and contraceptives for the women most in need of them. We are actively engaged in areas where maternal mortality is high and the prevalence of contraceptive use is low.[3]

PARTNERSHIPS

Merck participates in a number of coalitions that work to support women's reproductive health by increasing access to family planning, reducing maternal mortality and promoting collaboration between the public, private and not-for-profit sectors.

In order to ensure appropriate use of our products, Merck works closely with its customers to develop and help implement a framework for quality service provision and related support.

Throughout the world, Merck has partnered with organizations and supported projects that work to increase women's access to health services, to reduce maternal mortality, to increase awareness of reproductive/sexual health among adolescents and vulnerable populations, to prevent mother-to-child transmission of HIV/AIDS, and to promote women's empowerment and access to economic opportunities.

Improving access to information is essential to ensuring that girls and women can manage their health, reduce unintended pregnancies, and understand and obtain essential health services. Merck supports various programs and partnerships that provide health education and increase awareness around the world.

Partnering for Implementation

In the countries where Merck products are included in family planning programs, we work closely with ministries of health and local implementing partners, who play a pivotal role in supporting training, counseling and other related activities. Our local implementing partners have included **Jhpiego**, **EngenderHealth**, **Marie Stopes International**, **International Planned Parenthood Federation**, **Population Services International**, **Pathfinder International**,and **DKT**. Such collaboration ensures that countries have the expertise and support they need to achieve their reproductive health objectives.

In 2011, we worked with more than 30 countries in sub-Saharan Africa, Asia and Central America to provide contraceptive products through numerous partnerships with governments, donors and NGOs. Some of the countries where our Institutional Family Planning services engaged in partnerships in 2011

include Madagascar, Ethiopia, Kenya, Uganda, Tanzania, Nigeria, Bangladesh and Vietnam/Cambodia.

As part of our capacity-building and training commitment, Merck provided support and educational grants for governments and/or local implementing partners to train more than 35,000 healthcare providers in sub-Saharan Africa, Asia and Central America in 2011. Merck also trained and/or provided medical education to many healthcare providers around the world.

Bill and Melinda Gates Foundation (BMGF)
In 2011, BMGF established the Urban RH Initiative to support countries in achieving their Contraceptive Prevalence Rate (CPR) goals, but frequent stock-outs were found to seriously hinder progress. In order to identify the root causes of these frequent stock-outs and to develop transferable solutions, BMGF launched a supply chain assessment and set up the Global Advisory Board (GAB), to which Merck was invited to represent manufacturers. Merck actively participated in all three GAB meetings.

Population Services International
PSI measurably improves the health of people in the developing world through public and private sector development with a large international reach. PSI currently procures Marvelon directly from Merck. In Q4 2011, Merck and PSI signed the global Cooperation Agreement on the Receipt and Use of Implanon, giving the vast PSI network access to Implanon in more than 50 countries. PSI has begun receiving Implanon through donor organizations, e.g., through USAID funding/procurement for its program in Madagascar, and direct supplies of Implanon from Merck are currently in discussion. Merck previously supplied Implanon to the PSI program in Cambodia.

GBCHealth's Healthy Women, Healthy Economies Initiative
Healthy Women, Healthy Economies is a strategic partnership between GBCHealth and the State Department bringing together corporations, governments and NGOs to realize shared goals faster and more effectively. During its first phase (November 2010–June 2011), GBCHealth convened leaders from across sectors to map out a global business action plan for promoting opportunity for girls and women that dovetails with U.S. president Barack Obama's Global Health Initiative.

MDG5 Meshwork for Improving Maternal Health
The mission of the MDG5 Meshwork is to develop innovative and effective partnerships that contribute to the achievement of Millennium Development Goal 5, which is to improve maternal health. The MDG5 Meshwork connects more than 30 organizations based in Afghanistan, Sierra Leone and the Netherlands working on five projects.

Partnership for Maternal and Child Health
The partnership's mission is to support the global health community in working successfully toward achieving MDGs 4 and 5. This mission is expected to be accomplished by achieving the following objectives:

- Build consensus on and promote evidence-based, high-impact interventions and the means to deliver them through harmonization
- Contribute to raising $30 billion (for 2009–2015) to improve maternal, newborn and child health through advocacy
- Track partners' commitments and measure progress for accountability

Reproductive Health Supplies Coalition (RHSC)
The RHSC is a global partnership of public, private and nongovernmental organizations dedicated to helping all people in low- and middle-income countries gain access to and use affordable, high-quality supplies that ensure better reproductive health.

The coalition brings together diverse agencies and groups with critical roles in providing contraceptives and other reproductive health supplies. These include multilateral and bilateral organizations, private foundations, governments, and civil society and private-sector representatives. Merck participates in various RHSC working groups, including the Market Development Approaches Working Group and the Resource Mobilization and Awareness Working Group. We also signed on to the RHSC's Hand to Hand campaign to reach the goal of 100 million new users of modern contraception by 2015.

The C-Exchange
The overall goal of The C-Exchange is to convene a group of corporate partners that will work together to bring women's

health products and services to market and scale them up in developing countries. The C-Exchange will focus on technological solutions that, if accessible, will help improve the health of girls and women. Access to four of the solutions—contraception, mobile communications, HPV testing and vaccination, and misoprostol—is available today, but scaling up can be complex and challenging. Merck is a member of The C-Exchange's leadership group of 10 to 12 private-sector corporations committed to helping Women Deliver shape, create and lead The C-Exchange.

Reaching Out to Young People

Teen pregnancies put young mothers and their children **at risk**. Children of teen mothers have higher rates of stillbirths, deaths in the first weeks after birth, preterm births, low birth weights and asphyxia. Ninety-five percent of births among women ages 15 to 19 occur in low- and middle-income countries. Fourteen percent of all unsafe abortions in low- and middle-income countries are among women of this age group. Pregnant adolescents also experience high rates of anemia, malaria, HIV and other sexually transmitted infections, postpartum hemorrhage, and mental disorders, such as depression.

U Ch00se Campaign
Since 2009, Merck has supported the U Ch00se Campaign in Bulgaria to foster a national awareness and prevention of sexually transmitted diseases (STDs), targeted at young people (ages 11–26) and providing information on sexual and reproductive health and healthy lifestyles through multichannel communication tools, including peer education. The U Ch00se Campaign is managed by the Association of Cancer Patients and Friends (APOZ), a Bulgarian NGO, in coalition with other local groups and organizations.

Improsexual Venezuela
According to UNFPA, Venezuela has the highest rate of teen pregnancy in South America, and more than 20 percent of births are to women under 20. The organization Improsexual uses interactive theater, music, art and storytelling to inform young people and help them take control of their reproductive and sexual health.

For more information on other adolescent-education interventions that work to improve sexual and reproductive health, and to reduce unintended pregnancies and transmission of STDs, including HIV, please visit our **HIV Partnership** section.

Providing Information about Women's Health

The Global Library of Women's Medicine (GLOWM) is designed to provide medical professionals worldwide with universal access to a vast and constantly updated, peer-reviewed resource of clinical information and guidance covering the whole field of women's medicine. GLOWM receives 2 million hits monthly, from 160 countries.

Human Network International (HNI) This project uses the innovative approach of an on-demand interactive voice response (IVR) directory service, via the ever-growing use of cell phones, that will afford thousands of women of reproductive age in Madagascar the opportunity to learn, at no cost to them, about the modern family planning method choices that are available and accessible to them, and will help assure more informed choice. The project aims to contribute to increasing the modern contraceptive prevalence rate.

Understanding Women's Reproductive Health Needs

Merck is supporting Mahidol University in Thailand in conducting research to better understand Thai women's reproductive health needs and barriers to access (e.g., access to cervical cancer screenings).

Fighting Maternal Mortality

Drishtee Foundation
works to reduce maternal mortality in India by educating women and their families about causes of maternal deaths and facilitating access to maternal health services through village Drishtee Health Kiosks.

Expanding Access to Care

Jhpiego is an international nonprofit health organization affiliated with The Johns Hopkins University working to prevent needless

deaths among women and their families. Jhpiego works with health experts, governments and community leaders to provide high-quality healthcare and develops strategies to help countries by training competent healthcare workers, strengthening health systems and improving delivery of care.

One of Jhpiego's key strategies for increasing the use of reproductive health (RH) and family planning (FP) services among the urban poor in Kenya is to offer routine integrated health camps in neighborhoods that lack access to quality healthcare services. In some of these camps, hundreds of women have accessed FP services in a single day.

One major component of the integrated health camp is a Health Wagon—a mobile clinic offering a clean and private environment for patients. Integrated health camps, with a Health Wagon present, will offer the full range of FP methods, as well as confidential counseling to all patients about their FP options. Jhpiego will also use the Health Wagon as a mechanism to provide on-the-job training and other updates for providers who work in urban healthcare facilities that may not offer a full range of RH/FP services.

With nine Merck-sponsored health camps, approximately 9,000 people will be offered FP information and services for short-term methods. An additional 450 people are expected to adopt long-acting and permanent FP methods at the health camps.

Economic Empowerment to Help Women

Join My Village
is a click-to-commit social change initiative that gives people the power to inspire charitable donations from companies to women and girls in Malawi and India. A project of CARE, Join My Village is a leading humanitarian organization fighting global poverty, with a special focus on working alongside poor women. For each click of a mouse, Merck will donate $1.00 to send girls to school on scholarships, bring female teachers to village schools and give village women the resources to launch their own businesses. Merck also matches personal employee donations dollar for dollar.

For family planning programs in the developing world involving Merck's contraceptive implant, IMPLANON® (etonogestrel implant), the company requires the recipient governments and partnering NGOs to sign a Cooperation Agreement for the Receipt and Use of IMPLANON (CARUI). The cooperation agreement includes:

- Merck's commitment to a comprehensive service approach that provides and/or supports capacity building in service delivery, including pre- and post-insertion counseling and insertion/removal training
- Distribution requirements that must be met by Merck and local partners to ensure that all clinics/providers meet training and quality assurance requirements, provide sustained services over the duration of the product's life (three years), and can access referral centers in case more specialized care related to IMPLANON is required
- Merck's commitment to fully fund all costs related to "training of trainers" and provide training materials, including audiovisual materials, training kits, artificial arm models, placebos, etc. Merck may provide additional technical and financial assistance for direct and cascaded training activities of healthcare providers on a case-by-case basis
- Procedures to report product complaints and adverse events
- Provisions regarding compliance with U.S. and recipient country applicable laws, and Merck's ethical and business compliance policies

ACCESS TO REPRODUCTIVE HEALTH

At Merck, our commitment to providing access to reproductive health has been demonstrated in our research and development of contraceptive products.

We continue to work hard to develop sustainable business models that will help improve access to our products for the people who need them most. Our partnerships with governments, international organizations and nongovernmental development organizations help support and implement programs that improve access and promote capacity-building.

Research & Development

Merck has a strong legacy of research and development of contraceptive products that have supported women's family planning efforts. Over the years, we have been responsible for the development of a wide range of contraceptive options, including a single-rod contraceptive implant, a once-monthly vaginal contraceptive ring, and progestin-only and combined oral contraceptives.

Sustainable Business Model to Promote Access

Merck is committed to making its contraceptive products available to women around the world. We take a comprehensive approach to access that includes high-quality manufacturing and supply chain management; extensive registration and World Health Organization (WHO) prequalification of our family planning products; responsible commercialization that incorporates training and capacity-building; and community investment.

In developing countries that have high rates of maternal mortality and low rates of contraceptive prevalence, our Institutional Family Planning Services division has created a sustainable business model to promote access to contraceptive health programs. These activities are focused primarily on sub-Saharan Africa and select markets in Asia and Latin America.

High-Quality Manufacturing & Supply Chain Management

We work to ensure that we have sufficient manufacturing capacity to meet short-, medium- and long-term availability of our contraceptive products for reproductive health programs conducted by governmental and nongovernmental organizations and other customers.

Registration & Prequalification

We seek to ensure global access to our contraceptive products by obtaining and maintaining up-to-date product registrations around the world. In addition to existing and in-process registrations, numerous registrations are planned for products in countries of various income levels.

- Note: For World Bank country classifications, please **click here**.

REGISTRATIONS

Product	Low Income	Lower-Middle Income	Upper-Middle Income	High Income (non-OECD)	High Income (OECD)	Total Current Registrations
IMPLANON® (etonogestrel implant)	15/1	12/3	11/4	10/0	25	82
EXLUTON® (lynestrenol oral contraceptive)	5/2	17	13/0	2/0	2	39
EXLUTON FP®	0/0	4/1	2/0	0/0	0	6
MARVELON 21® (desogestrel-ethinyl estradiol)	6/3	18/0	20/0	14/0	23	81
MARVELON 28 (FP)® (desogestrel-ethinyl estradiol)	1/0	8/0	4/0	0/0	6	19
MULTILOAD® (CU-250 and CU-375 intrauterine contraceptive device)	15/1	21/3	11/4	10/0	25	82

WHO Prequalification

In order to facilitate institutional purchases of family planning products and provide quality assurance, Merck has sought WHO prequalification for EXLUTON (lynestrenol), IMPLANON (etonogestrel implant) and MARVELON (desogestrel-ethinyl estradiol).

PREQUALIFICATIONS

Product	INN	Date of Prequalification
MARVELON©	Ethinyl estradiol + Desogestrel	October 21, 2010
IMPLANON©	Etonogestrel	June 18, 2010
EXLUTON©	Lynestrenol	June 18, 2010

Commercialization

The success of reproductive health programs in the developing world relies upon the close cooperation and coordination of many partners, including pharmaceutical companies, like Merck, that discover, develop and manufacture contraceptive products; national governments that seek to support family planning by increasing the use of contraception; international, bilateral and multilateral donors that finance the purchase of reproductive health commodities and invest in service delivery management and implementation; nongovernmental organizations that support implementation of such programs; and healthcare professionals and health extension workers who counsel and provide care for women around the world.

As one of many partners, Merck takes the following steps to support family planning programs and to help increase awareness and access to a broad choice of contraceptive products.

Requests for Quotation

Merck receives and responds to "Requests for Quotation" from developing countries governments seeking supplies for their own programs (financed by government funds, by multilateral organizations like the World Bank or through bilateral aid); from donor country aid agencies (e.g., USAID, DfID, KfW) seeking to purchase reproductive health commodities that will be donated to programs in one or more countries; from multilateral agencies such as the

United Nations Population Fund (UNFPA), donating to one or more countries; or from nongovernmental agencies seeking supplies for programs that they manage in one or more countries.

In responding to these requests, Merck adheres to the specific guidelines of each proposal and acts in full compliance with local and international laws and requirements.

Pricing

For contraceptive product pricing, we consider a nation's level of economic development and other relevant factors, including the type of family planning programs implemented by the local government.

In upper-middle-income and high-income countries, we provide our products at prices that take into account the innovation and value they represent. With a commitment to making our contraceptive products available to the public sector, we also offer discounts to organizations that serve women of all income levels, like Planned Parenthood affiliates, so that the women who rely on their services have routine access to contraceptive options that include nondaily and long-acting reversible methods.

In order to facilitate the purchase of our products for use in institutional family planning programs in low-income and lower-middle income countries, we price our reproductive health commodities at their lowest access prices when selling them to qualified buyers.

We believe that our pricing approach will help improve product availability while also allowing the company to continue to invest in research, development, production, and the training and education necessary to help ensure appropriate counseling and in the use of our products.

In June 2011, Merck established a lower price for IMPLANON for qualified buyers. Through this new approach, we are working to make IMPLANON more affordable by establishing a new lower access price for low-income countries. Under this initiative, Merck introduced an innovative financing mechanism that leverages the Pledge Guarantee for Health[1] to help donor funds further increase access to contraceptives. Donors, governments and NGOs will be eligible for the access price for IMPLANON in these countries.

This change is consistent with Merck's continuing commitment to increasing access to IMPLANON in resource-limited countries through community investment, access pricing, medical education, and engagement with local ministries of health, the local and global development community, donors, governments and NGOs. **Learn more**.

[1] The Pledge Guarantee for Health (PGH) developed in 2009 under the leadership of the Bill and Melinda Gates Foundation, the Reproductive Health Supplies Coalition, Dalberg Global Development Advisors, and the United Nations Foundation. PGH is an innovative financing mechanism aimed at providing bridge financing to grant recipients on the basis of pending aid commitments. This mechanism leverages both letters of credit and supplier credit through bank guarantees backed by the Bill and Melinda Gates Foundation so that health supplies can be shipped ahead of time while the normal processes of transferring donor funding for a particular commodity are worked out. PGH is managed by the UN Foundation.

ENVIRONMENTAL SUSTAINABILITY

Merck published its first environmental report and publicly announced environmental improvement goals in 1990, and has been reporting on progress and environmental footprint measures since 1993.

This report provides information about Merck's environmental program and performance data for the year 2011.

ENVIRONMENTAL SUSTAINABILITY ROAD MAP

Our Vision

We respect and care for the environment in everything we do. A healthy planet is essential to healthy people and the health of our business. **We envision:**

Innovative products and packaging	Sustainable operations and supply chain	Systems & lifecycle thinking
2010–20 NEAR-TERM leaner and smarter	2015–30 MEDIUM-TERM transformation	2025–50 LONG-TERM environmental sustainability

1. Set near-term targets and communicate long-term vision	• Create 2015 and 2020 environmental goals • Establish and communicate environmental sustainability vision
2. Drive business process change	• Identify and implement business processes toward environmental sustainability
3. Report on progress	• Provide transparencey on progress and engage with stakeholders
4. Focus on water	• Work toward more sustainable water management • Reduce impact of water-related disease through core business activities, partnerships, advocacy and volunteerism

SUSTAINABILITY VISION

Merck has a long history of environmental responsibility and compliance, but we realize that the world's current approach to resource use is not sustainable and that more needs to be done.

We believe companies—including our own—share the responsibility for creating a sustainable economy. At Merck, we strive to respect and care for the health and well-being of people and the environment in everything we do while delivering life-saving innovative medicines to the world.

Our environmental sustainability efforts center on three areas:

Innovative Products & Packaging

- Challenging our scientists, colleagues and partners to imagine, discover and develop products that address global health needs in ways that protect and preserve the environment
- Working to minimize the life-cycle footprint of the packaging used to protect the integrity of our products

Sustainable Operations & Supply Chain

- Promoting ways to drive manufacturing efficiency and minimize the environmental footprint of our operations to preserve and protect the earth's natural resources
- Partnering with suppliers throughout our value chain who share our vision and who also commit to take action

An Integrated Approach

- Establishing a culture where the principles of environmental sustainability are understood and applied by every Merck employee and supplier
- Striving to integrate sustainability into our business decision-making processes throughout the company, to make sure our activities support Merck's "Be Well" mission not only for human and animal health but also for the environment

ENVIRONMENTAL MATERIALITY

A materiality assessment seeks to identify the issues that are important to the business, the community and the environment, and to prioritize them for action by the company.

Merck's products include prescription medicines, vaccines, biologic therapies and a diverse portfolio of consumer and animal health products. Our global operations include research laboratories and farms; manufacturing and packaging facilities; warehouse and distribution centers; a field sales force; and business offices. In recent years, we have begun moving from manufacturing and packaging the majority of our products at our own facilities toward a supply model that also uses external manufacturers to augment our internal capabilities.

Our direct environmental footprint is largely related to the resources and materials we use to do research and to manufacture our products, as well as the wastes that are generated, treated and disposed of as the result of those activities.

The products that we make, especially our pharmaceuticals, vaccines and biologic therapies, require very pure ingredients and rigorous cleaning procedures. Synthesis of complex pharmaceutical compounds often requires multistep processes involving significant temperature changes and high-purity ingredients and solvents. Our vaccines and biologic therapies generally involve living microorganisms that require strict growth conditions and significant amounts of highly purified water.

As a result, the key areas identified by our environmental materiality assessment are:

- Water
- Energy & GHGs
- Solvents (generation, transport, use, and disposal life cycle)

While we largely focus in this report on the impacts of our own operations, the issues that are material to us are mirrored in our supply chain by the external manufacturing partners who also make products for us. For more information on our supply chain, **click here**.

ENVIRONMENTAL GOALS

All goals have a 2009 baseline unless otherwise stated.

OUR ENVIRONMENTAL GOALS		STATUS 2011	GOALS 2015	GOALS 2020
AIR & CLIMATE CHANGE	Reduce greenhouse gas (GHG) emissions	-7%	-10%	
	Reduce volatile organic compound (VOC) emissions	-17%		-20%
WATER	Reduce total water use	-9%	-15%	-25%
	Reduce chemical oxygen demand (COD) in discharges	-51%	-15%	-20%
	Reduce nitrogen and phosphorous in discharges	-20%	-10%	-15%
PACKAGING	Eliminate PVC from non-primary packaging	IN PROGRESS	-100%	
	Use more sustainable paper products [1]	IN PROGRESS	50%	
	Sell more products with sustainable packaging [2]	IN PROGRESS		50%
WASTE	Use more recovered solvents in manufacturing [3]	35%		40%
	Recycle more nonhazardous waste [4]	46%	60%	
	Reduce nonhazardous waste generation	-5%		-30%
	Improve process mass intensity (PMI) [5, 6]	TBD	ESTABLISH BASELINE	TBD

[1]Sustainable paper products include paper and packaging made from at least 30% postconsumer recycled content or from certified or sustainable alternative fiber.
[2]Measured as percent of revenue from products with at least one sustainable packaging attribute.
[3]Measured as percent of total solvent use that is recovered material.
[4]Measured as percent of total nonhazardous waste generated that gets recycled.
[5]Process mass intensity is a measure of how efficiently materials are used in the synthesis of an active pharmaceutical ingredient (API).
[6]Once the baseline is established for Merck's top APIs, an improvement target will be set.

EHS MANAGEMENT & COMPLIANCE

At Merck, protecting the health and well-being of our employees and the public, protecting and preserving the environment; ensuring the safety of our employees and those who live in the vicinity of our facilities; and being in full compliance with the law are all fundamentally important to the way we operate.

Our mission and values are articulated by Merck's corporate **Environmental, Health and Safety (EHS) Policy**. In addition to compliance with all applicable country, regional and local safety and environmental laws, we strive for EHS performance that is among the best in the pharmaceutical industry.

Merck's commitment to environmental, health and safety begins with the company's Executive Committee, which has established the corporate EHS Council. This council, composed of senior-level executives, is responsible for overall EHS governance as well as leading and driving enterprisewide excellence in EHS management and performance. Specific Council duties include:

- Establishing EHS strategy, policy and management systems
- Providing enterprisewide oversight of EHS issues, risk mitigation and control strategies
- Monitoring the EHS performance of the company and establishing continuous improvement targets
- Promoting and recognizing EHS excellence in the company's divisions
- Allocating resources and taking EHS performance into account when determining divisional and individual compensation and awards

To support the achievement of these goals, the EHS Council has established the EHS Standards Committee. This committee, composed of senior-level managers, is responsible for understanding the intent of Council goals, ensuring that the EHS programs and systems developed will deliver on those goals in their organizations, and, once approved by EHS Council, supporting implementation of those programs and systems in their areas. This partnership reflects the principle that delivery of EHS performance is the responsibility of business and operations personnel supported by corporate and site EHS professionals.

Merck's vice president of Global Safety and the Environment is responsible for communicating to the Executive Committee and to the corporate EHS Council our progress on goals, objectives and metrics and other material issues, as well as recommending both long- and short-term objectives and metrics. Responsibility also includes addressing those needs through the EHS Standards Committee.

Our corporate EHS organization is responsible for:

- Developing corporate policies, procedures, guidelines and standards, goals, and tools and programs to drive EHS compliance and performance improvements
- Providing technical and regulatory support to site safety and environmental groups and to operating organizations
- Auditing Merck's operating organizations to confirm that appropriate programs are in place to ensure compliance, employee safety and environmental protection
- Looking both externally and internally for emerging trends, issues and practices that should be addressed in our operating organizations
- Anticipating, tracking and commenting on new regulations affecting our business

Our site and operating area EHS professionals are responsible for implementing programs and supporting the EHS needs of their partners, which might include manufacturing, research operations, sales and/or administrative activities, by:

- Ensuring that line management fully understand EHS requirements
- Establishing, assessing and improving EHS programs
- Providing regulatory and technical support to employees and the operating areas

- Routinely assessing the performance of the operating areas against both regulatory and Merck requirements
- Acting as the primary liaison with local regulators and inspectors
- Investigating incidents and developing corrective action plans to address identified root causes

EHS Policy, Management System & Procedures

The EHS Policy documents Merck's EHS mission and values and serves as a vehicle to communicate them to all employees.

Merck's EHS Management System follows the classic "Plan, Do, Check and Act"-model, and is implemented through a set of interwoven business processes that span the corporation.

- The planning process includes development of goals, objectives and metrics based on a review of company performance, EHS programs, applicable regulations and other external factors [PLAN]
- EHS Procedures, which are integrated into the EHS Management System, detail the program implementation expectations for sites and operating organizations. The Procedures are developed and reviewed by representatives from EHS, Legal and the affected operating areas. The EHS Standards Committee provides governance over changes to EHS Procedures and enables business engagement in the development and implementation of new or revised EHS Procedures. [DO]
- Governance committees, from the Corporate EHS Council through site compliance committees, review performance and progress against objectives. Central audits and self-assessments surface issues. Monthly and annual performance metrics reflect progress. [CHECK]
- The EHS Management System includes procedures and programs that drive the discovery and resolution of EHS concerns [ACT]

Internal Auditing Program

For more than 20 years, Merck has conducted internal corporate safety and environmental audits of our facilities worldwide. Audits are scheduled through a risk-based process. As a result, manufacturing and research sites are typically audited every two or three years; a few large sites are audited annually. Sales and business offices and our warehouses are less complex, and are typically audited every five or more years. In many cases, particularly outside of the United States, our internal auditors work with independent consultants who have regulatory expertise in the laws of the host country.

In the last few years, we have enhanced our corporate EHS audit practices to make them more detailed and rigorous, helping to better identify compliance and performance issues.

- Our audit team leaders are full-time professional EHS auditors with extensive experience in auditing procedures, regulatory requirements and hazard recognition
- Our audit team pool consists of staff members with extensive subject-matter expertise who receive biannual training in the audit process
- We place a strong emphasis on rapid and sustainable resolution of all identified compliance issues. Audit teams provide coaching as appropriate during the audit and frequently remain on site after the audit to provide formal training and/or additional expertise.
- Findings from our audit program are used to alert other Merck site EHS managers to potential compliance concerns, both through routine summaries and as focused alerts
- Audits are also used to identify proven practices to be shared with other sites

Training

Training is critical to ensuring that our managers, our EHS staff and our employees worldwide understand their roles in driving EHS performance, and have the knowledge and skills to fulfill their responsibilities.

Manager training covers specific management responsibilities with regard to compliance and promoting a "safety first" culture. Training includes conducting EHS inspections, driving closure of findings, contributing to incident investigations, and communicating effectively about EHS requirements and expectations to drive desired behaviors.

EHS staff training is based on established standard curricula designed to drive more consistent technical expertise and improved EHS support capabilities around the world. The curricula address technical training needs, from core fundamentals through expert-level topics, using both internal subject-matter experts and approved external instructors. In 2011, additional emphasis was placed on business skills competencies aligned with Merck's Leadership Behaviors. This overall approach to EHS staff training helps us develop EHS professionals at all levels of our organization.

Our EHS Management System defines the comprehensive EHS training expectations for employees. The program includes standardized guidance documents that provide clear expectations on topics and content. In 2011, 37 core content modules were developed and translated into seven languages to support the training needs of local sites and to globally align our employee-training content, which is available in both instructor-led as well as in e-Learning formats.

PERFORMANCE & COMMITMENTS

Performance

Merck's centralized environmental, health and safety (EHS) information system allows us to collect, manage, learn from and share our safety and environmental performance data more efficiently. We continue to explore ways to expand the scope and use of EHS information systems to enhance our ability to collect, maintain, analyze, learn from and report EHS data. Historically, we have collected and analyzed both leading and lagging metrics to identify potential trends and opportunities that could help us to drive EHS performance improvement. In 2011, we added information from our internal EHS audit program to the EHS information system to help us identify additional opportunities.

Regulatory Inspections

In 2011, Merck received 197 inspections by EHS regulatory agencies around the world. This represents a 13 percent reduction in the number of regulatory inspections from the prior year. These inspections helped to confirm the positive compliance status of our facilities. Where compliance issues were identified, they did not represent significant risks to human health or the environment and are not expected to result in significant enforcement actions. Corrective actions to address identified issues were implemented in a timely manner.

Environmental Events

Merck experienced 76 water permit exceedances in 2011, versus 94 in 2010, and 7 air permit exceedances in 2011, versus 12 in 2010. These events were generally minor and temporary.

This report reflects the number of spills and releases at our facilities greater than 55 gallons and those of any amount requiring reporting to a regulatory authority. Merck experienced 123 spills and releases in 2011, an amount comparable to the prior year's. More than half of these were spills of either brine or wastewater or were spills into secondary containment. One spill in 2011 had the potential for adverse impact. This incident was of short duration and the spilled substance, which reached the ocean, has low toxicity to fish and invertebrates. Appropriate corrective measures were implemented and learnings were shared with other Merck sites. As a result of this incident, an environmental regulatory agency issued a notice of violation (NOV) to the facility. Spills and releases outside of secondary containment are assessed through rigorous procedural and technical methods to understand potential impact and drive appropriate mitigation strategies when needed.

Citations, Notices of Violation, Fines & Settlements

Merck received 8 safety NOVs in 2011, compared with 14 received in 2010. The 2011 NOVs include notices from regulatory agencies with a primary focus on EHS issues. Merck paid two safety-related fines totaling $7,500 in 2011.

Merck received 26 environmental NOVs in 2011, which is a 19% reduction from the prior year. Merck paid $1,791,765 in fines associated with environmental enforcement actions in 2011. The major portion of the 2011 fines, $1.5 million, was related to an agreement with the Department of Justice (DOJ) [representing the Environmental Protection Agency (EPA)] to resolve issues identified during multimedia environmental inspections that occurred in 2006 at two Merck sites in Pennsylvania—West Point and Riverside. As noted by both the DOJ and the EPA, discrepancies identified during the inspections resulted in no environmental harm and were promptly corrected.

GLOBAL ENVIRONMENTAL AND SAFETY COMPLIANCE PERFORMANCE DATA SUMMARY	2009	2010	2011
Regulatory Inspections[1,2]			
Safety	117	69	57
Dangerous goods	6	3	7
Environmental[3]	165	155	133
Environmental Events			
Reportable spills and releases	92	127	123
Water permit exceedances	130	94	76
Air permit exceedances	13	12	7
Other permit exceedances	NR	3	1
Notices of Violations (NOVs)/Citations			
Environmental	30	32	26
Safety	5	14	8
Fines			
Environmental Fines Paid (US$)	8,000	70,201	1,791,765
Number of environmental fines	1	9	15
Safety fines paid (US$)	1,350	631	7,500
Number of safety fines	11	1	2

[1] Regulatory Inspections have been revised to exclude noncore (e.g., elevator and cafeteria) inspections.

[2] Data for 2009 and 2010 has been restated.

[3] There was four product-related inspections in 2010, and one in 2011.

NR: Not reported.

Commitments

- Comply with the letter and spirit of all applicable laws, regulations and other requirements designed to protect safety, health and the environment
- Create and maintain a safe and healthy working environment for all employees, contractors and guests
- Protect our environment and the communities in which we operate; conserve resources, promote recycling, reduce hazardous-material use and prevent pollution
- Promote a global standard of care that minimizes EHS impacts from our operations, products and partnerships
- Foster a culture of EHS excellence built upon integrity, accountability, collaboration and the active participation of all
- Continuously improve our systems, processes and performance and integrate EHS throughout our global operations
- Engage stakeholders and communicate our progress and performance
- Provide appropriate resources and build individuals' knowledge and capabilities to achieve these commitments

ENERGY USE & CLIMATE CHANGE

Numerous studies supported by leading scientists worldwide have concluded that a gradual warming of our climate, commonly referred to as climate change, is under way and is largely the result of human activity.

To address this serious concern, Merck is taking steps to adopt responsible policies and practices to reduce greenhouse gas (GHG) emissions. By taking early action to understand how we use energy and to reduce our GHG emissions, we also believe we will minimize the impact of anticipated regulatory requirements associated with climate change and reduce our current and future operating costs.

Merck's first corporate GHG reduction goal was to reduce GHG emissions from the company's global facilities and automobiles by 12 percent by the end of 2012 (from the baseline year of 2004). Merck achieved and exceeded that goal in 2009, well ahead of schedule. Following the merger, we established a new **GHG emissions goal** of a 10 percent reduction for the period 2009 to 2015 through energy-reduction efforts.

Energy

Since establishing our first corporate energy policy in 1994, Merck has made it a priority to reduce our demand for energy.

We established a Center of Excellence (COE) in Energy that is responsible for identifying and implementing best practices for reducing energy use across the company. Our program emphasizes conserving energy over the use of renewable energy, because reducing our energy demand is the better option for our business and for the environment. Because the majority of demand for energy occurs at our manufacturing, warehousing, laboratory and major office facilities, we target them in our energy–demand reduction programs. We also evaluate how we use energy in our vehicle fleet and in employee business travel to identify opportunities to reduce costs and environmental impact.

In 2008, our Energy COE developed efficiency metrics for all major energy-using systems at Merck and continues to use these metrics to help improve performance. We also continue to improve our Best Practices Evaluation Tool, which sites use to identify improvement opportunities. The tool can be used to assess 14 categories of energy demand, including HVAC, steam distribution, meters, lighting and compressed air.

To achieve our corporate GHG goal, we expect to continue to increase our energy efficiency while reducing our reliance on fossil fuels. Projects include installation of variable speed drives in our manufacturing and research facilities; reassessment of production, green research and office buildings; the use of free cooling and heat recovery from recirculating water systems; and multiple renewable energy initiatives (e.g., solar and wind). Management has committed up to $50 MM over the five-year period (2009–2015) to help drive these reductions and better position the company to respond to energy demands in the future.

Greenhouse Gases

Merck tracks five greenhouse gases GHGs: carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons and sulfur hexafluoride.

The majority of our GHG emissions are associated with CO_2 Perfluorocarbons (PFCs) are not tracked because they are typically not used at Merck facilities. In addition to GHG emissions associated with our facilities and vehicle fleet, we also are gathering emissions data associated with business travel and materials transportation as part of GHG inventory and reporting.

Since 2005, we have been reporting our GHG emissions annually through the **Carbon Disclosure Project**, and we were a member of the U.S. EPA Climate Leaders program from 2002 until the agency phased out the program in late 2010.

Although we fully support and have participated in voluntary programs to reduce GHG emissions, we recognize that national and even multinational frameworks will be required to fully address climate change. The company supports a global approach that stimulates the development and broad use of energy-efficient technologies and avoids unnecessary economic disruptions and the inefficiencies of disparate local, state or regional requirements. Merck currently holds GHG emission allowances under the European Union (EU) Emission Trading System (ETS) at four sites in that region.

We expect to continue to reduce our GHG emissions. In line with our position on climate change, we are fully committed to implementing energy-efficient and environmentally friendly technologies, materials and products; using renewable energy resources; and reporting on our progress toward achieving our goals.

PERFORMANCE & COMMITMENTS

Global Energy Use and GHG Summary[1]	2009	2010	2011
Total energy (trillion BTU)	28.9	27.1	26.2
Total greenhouse gas (GHG) emissions (million metric tons of CO_2e)[2,3]	2.14	2.08	2.09
Total GHG emissions (million metric tons of CO_2e)[3]	2.32	2.20	2.09
Energy by Source, Scope 1 & 2 (% of total)			
Natural gas	54%	54%	60%
Purchased electricity[4]	27%	28%	26%
Fleet fuel	13%	12%	10%
Purchased steam	3%	4%	2%
Fuel oil	2%	1%	1%
Spent solvents	0.1%	0.5%	0.6%
Coal	0.0%	0.0%	0.0%

[1] Prior reported data have been restated to reflect the most accurate information available.
[2] Applied updated EPA greenhouse gas emission factors to 2010 results.
[3] In accordance with the Greenhouse Gas Protocol, prior-year GHG data have been adjusted to remove facilities that have been acquired and sold.
[4] Includes solar, wind and other renewables generated on-site where renewable energy credits have been sold.

GHG Emissions from Business Travel (metric tons)	2011
Air	115,149
Rail	90
Auto	
Rental car	3,011
Employee reimbursable mileage[1]	9,158
Hotel	9,814
Total	137,222

[1] No data available for 2009 and 2010.

INITIATIVES

Merck is engaged in many initiatives worldwide to improve energy use and reduce greenhouse gas (GHG) emissions from our operations.

Facility Design

Because the vast majority of our GHG emissions are the result of energy use, we factor the potential for future emissions into capital expenditure planning, requiring all new facilities to comply with our Energy Design Guide and Energy Conservation Planner. When we purchase new facilities, we evaluate them for energy efficiency and assess them against our best practices as part of their integration into Merck.

We also have adopted a corporate-wide global commitment to build all new laboratories and offices to achieve LEED® Silver Certification or its equivalent. Most recently, we achieved LEED certification for our new Hangzhou, China, multidivisional facility and for a laboratory in Durham, North Carolina.

Merck has one facility with a combination green and solar photovoltaic roof. The 25 kilowatt (kW) solar array comprising 110 panels has generated almost 24 megawatt hours (MWh) of electricity. The 2,700 square feet of green plants provide insulation to the building and extend the roof's life by protecting it from ultraviolet (UV) light. In addition to the other benefits, the green roof reduces the impacts of stormwater runoff by capturing about 90 percent of rainwater or approximately 60,000 gallons.

Renewable Energy Projects

- Seven sites installed solar arrays in 2011. Together they produced more than 5,400 megawatts (MW) of energy and eliminated over 2,500 metric tons of (MT) CO2 emissions
- Two 2 MW wind turbines installed at our Cramlington, U.K., site in late 2010 generated more than 11,700 MW of energy in 2011

Vehicle Fleet

Almost one tenth of our energy use is associated with our vehicle fleet. The merging of the two legacy companies' sales fleet and optimizing of the combined sales force have resulted in the reduction of GHG emissions by more than100,000 MT.

Between 2009 and 2011, we converted our U.S. Human Health sales fleet, which represents 28% of our corporate fleet miles driven each year, from 6 cylinder to 4 cylinder cars. In addition, pilot projects involving hybrid, alternative fuel and electric cars are under way.

Partnerships

U.S. Environmental Protection Agency (EPA) ENERGY STAR: This partnership provides a broad energy-management strategy that serves as a useful framework for measuring our current energy performance, setting goals, tracking savings and rewarding improvements.

In 2012, the EPA again recognized Merck with the Sustained Excellence Award. This is the seventh consecutive year we have been recognized by ENERGY STAR for excellence in energy management. For more information on our awards **click here**.

Business Roundtable Climate RESOLVE (Responsible Environmental Steps, Opportunities to Lead by Voluntary Efforts): The Climate RESOLVE initiative seeks to have every company in every sector of the economy undertake voluntary actions to control GHG emissions and improve the GHG intensity of the U.S. economy.

Carbon Disclosure Project (CDP): The CDP is an investors-backed group that annually requests emissions data from listed companies around the world. Merck has reported its GHG emissions since 2005 to the Carbon Disclosure Project and participates in workshops and seminars sponsored by the CDP. In 2011, at the request of a major customer of ours, we also participated in the CDP GHG Supply Chain project, which involved disclosing our GHG-related environmental impacts.

WATER

Since clean water is essential for health, our water strategy will help us to fulfill our mission to help the world be well.

Our business, our suppliers and our customers depend on access to clean water. As we expand to meet the needs of emerging markets, we are increasingly operating and engaging with people and partners in regions of the world where clean water and sanitation are under great strain. Even in established markets, our business faces serious water-related risks. The vision of our global water strategy is to achieve sustainable water management within our operations and our supply chain and, as part of our commitment to fighting disease, to reduce the impact of water-related disease through our core business activities, partnerships, advocacy efforts and employee volunteerism.

In support of our vision Merck will:

- Work to reduce our operational water footprint
- Report publicly on our water use and goals
- Advocate for good water policy
- Work with partners to address water needs in communities globally
- Encourage and empower our employees to be water stewards at work, at home and in their local communities

Merck's commitments to water are aligned with the UN CEO Water Mandate and are detailed in our **water public policy statement**. Merck endorsed the UN CEO Water Mandate, a public commitment to adopt and implement a comprehensive approach to water management, in April 2011.

Merck also has established **goals** to reduce our use of water and improve the quality of our operational wastewater discharges. To facilitate achieving these goals, Merck has committed funding for improvements in reducing water demand and enhancing wastewater treatment.

Because of the strong interdependency between our water and energy use, Merck's global energy team is responsible for implementing water use reductions. The energy team is continuously evaluating how the company uses water, specifically in utilities, and has developed and is implementing water conservation best practices.

The water use data for 2009 and 2010 have been restated to include a large manufacturing plant purchased in 2010 that was operational in 2009. During 2011, Merck used 9.2 billion gallons of water versus 10.1 in 2009. This reflects a 9 percent reduction in water use over this period. Approximately 72 percent of the total water we use is supplied from nearby surface water and groundwater resources. The balance of our water comes from municipal water supplies.

At Merck, much of the water we use is for cooling utility systems in manufacturing plants that produce active pharmaceutical ingredients; these systems require large volumes of cooling water. Although 45 percent of the water we used globally in 2011 was for once-through non-contact cooling (NCC), a process by which water is pumped into a plant, circulated through heat-exchange piping to cool processes and then discharged, this use reflects a 13 percent reduction from 2010. We are working on further reductions in the use of NCC water.

Many Merck facilities employ water reuse and recovery strategies, such as recirculation of water in cooling towers and condensate recovery. During 2011, we recycled or reused 1.9 billion gallons of water, which reduces our demand for freshwater by 17 percent.

On World Water Day 2012, Merck announced a three-year partnership with the **Safe Water Network**, through which we are supporting efforts to bring **sustainable water solutions** to the rural poor in India. The initiative will provide safe water to another 20,000–30,000 people by adding a dozen new sites to Safe Water Network's existing field projects in the state of Andhra Pradesh. The Network already provides nearly 40,000 people with access to clean water. In addition to supporting

these water projects, we will also work to drive behavior change by increasing awareness in the region of the importance of clean water and hygiene. Key findings will be broadly shared to help lead to more wide-scale change.

We are also partnering with UN-Habitat, Coca-Cola and New Delhi Television Limited (NDTV) on the innovative "Support My School" campaign, which aspires to increase access to clean water and sanitation facilities for school children across India.

As Merck's managing director in India, K.G. Ananthakrishnan, has said, access to clean water is too great for any one organization to tackle on its own. But together, over time, with the right partners, we can help bring significant change.

Water, Protecting a Global Resource, What Merck Employees Can Do, a booklet describing what we can do as a corporation and as individuals to address water issues at a local level, was created in 2011 and distributed to all our employees.

For details on the treatment of our wastewater, see **Emissions, Effluents and Waste**. For details on Pharmaceuticals in the Environment (PIE), see **Product Stewardship**.

- **Water public policy statement**
- **Water pamphlet**
- **World Water Day 2012**

PERFORMANCE & COMMITMENTS

WATER USE GLOBAL SUMMARY

Note: Previously reported data have been restated.

INITIATIVES

Merck is engaged in numerous initiatives worldwide to reduce our water use.

- Merck has initiated a fund of approximately $100 million to finance improvements in infrastructure to help achieve Merck's water commitments at our operating facilities around the world between 2010 and 2015
- The Energy Center of Excellence is implementing best practices at new and remodeled facilities and updating existing facilities. Examples include carefully controlling cooling-system operations; repairing steam-distribution systems and traps; recovering and reusing steam condensate and water purification "reject water"; optimizing production of process water; avoiding the use of water in mechanical seals, such as in pumps; and considering the total cost of water in energy-project evaluations.

- New laboratories and offices are required to achieve **LEED® Silver Certification**, or its equivalent, globally. Where possible, this also applies to build-to-suit leased office facilities. We have achieved LEED certification for our new Hangzhou, China, multidivisional facility and for our laboratory in Durham, North Carolina.
- We have conducted energy and water "treasure hunts" at four of our research and manufacturing facilities. At each facility, volunteers spent three days looking for opportunities to reduce demand for both energy and water, resulting in the implementation of projects that have reduced costs while conserving water and resources as well as reducing GHG and other emissions and water discharges.

For details on awards won for some of these initiatives, **click here**.

EMISSIONS, EFFLUENTS & WASTE

Merck is committed to designing, operating and maintaining our facilities and manufacturing processes in a manner that protects people and the environment.

The management of emissions, effluents and wastes from our facilities is important to the communities where we operate. To minimize our environmental footprint, we design processes that avoid or reduce demand for hazardous materials, reuse or recycle materials, and prevent the generation of waste. When prevention, reuse and recycling are not practical, we apply controls and treatment technologies.

By tracking our emissions, effluents and wastes worldwide, we are able to identify the greatest opportunities to reduce our direct environmental footprint, evaluate the overall impact of new projects and ensure that we maintain reductions achieved through past initiatives.

Reducing emissions and wastes of all types begins with the original design of our pharmaceutical manufacturing processes and continues through their installation and operation. Through our **green chemistry** program we design new processes that use more benign chemicals and reduce generation of waste and consumption of energy, water and other resources. Our process development chemists have the green chemistry expertise and partners to support the development of more sustainable ways to synthesize our products. Our engineers look for projects to make our production more efficient.

There is more information about how we manage our **solvent use**, our **air emissions**, our **wastewater effluents**, our **waste**, and our **remediation program**, as well as data about our **performance** in these areas.

PERFORMANCE & COMMITMENTS

EMISSIONS, EFFLUENTS AND WASTE SUMMARY	2009[1]	2010[1]	2011
Manufacturing Solvent Use (metric tons)			
Fresh solvents[2]	48,000	59,000	57,100
Recovered solvents	27,000	36,000	28,500
TRI emissions (metric tons)[3]			
TRI emissions (metric tons to air and water)	948	535	358
TRI emissions to air	341	287	217
TRI emissions to water	607	248	141
Air pollutant emissions by type (metric tons)			
Ozone-depleting substances (ODS)[4]	13.2	1.2	0.6
Nitrogen oxides (NOx)[5]	637	684	652
Sulfur oxides (SOx)[5]	242	187	159
Volatile organic compounds (VOCs)[6]	1,123	1,122	931
Wastewater Characteristics (metric tons), COD and Nutrients			
COD (total discharged)	6,517	5,545	3,166
COD discharged to surface water	433	561	604
COD discharged to municipal treatment plant	6084	4984	2562
Nutrients (total discharged)[7]	376	396	305
Nutrients discharged to surface water	50	73	59
Nutrients discharged to municipal treatment plant	326	324	246
Waste Generated (metric tons)			
Hazardous waste generated[8]	84,800	85,300	81,000
Hazardous waste recycled (% of total)	25%	22%	30%
Hazardous waste for energy & other recovery (% of total)	25%	32%	28%
Industrial waste generated[9]	34,000	39,000	50,000
Nonhazardous waste generated[6]	64,000	63,000	65,000
Nonhazardous waste recycled (% of total)	44%	48%	46%

TRI: Toxic Release Inventory

COD: chemical oxygen demand

[1] Previously reported data has been revised.
[2] Data includes purchases of solvents in bulk (tank trucks, railcars) and large containers (>100 liters).
[3] Includes worldwide facilities.
[4] Seven tons of emissions were associated with a single halon-based, fire-suppression-system event in Pennsylvania in 2009.
[5] Numbers adjusted to incorporate leased facilities and fleet tailpipe emissions.
[6] Data should be considered an estimate because many of these waste streams are not weighed prior to disposal.
[7] Nutrients = sum of total Kjeldahl Nitrogen + Nitrate-Nitrogen + Phosphorus.
[8] Includes all wastes that require special handling, as defined by a national, state/provincial or local regulatory agency (e.g., RCRA, special waste, chemical waste, dangerous waste). It also includes petroleum products, pharmaceutical actives/intermediates, medical/biological/infectious materials, or any other materials or compounds that are specially regulated due to the hazard they pose to human health and/or the environment.
[9] Industrial wastes includes a variety of nonhazardous streams related to manufacturing that are either liquids or sludges.

AIR EMISSIONS

Air emissions can have local, regional and global impacts.

The largest source of air emissions at our sites is carbon dioxide (CO_2) from the production and use of energy and from other combustion processes, such as thermal oxidizers (for treating air emissions) and solid waste incinerators. For more information on greenhouse gas emissions and energy use, **click here**.

The combustion processes that produce our energy also result in emissions of nitrogen oxides (NOx) and sometimes sulfur oxides (SOx), depending on the fuels used. As we reduce the need for energy production through our efficiency projects, we will also be reducing the emissions of NOx and, in some cases, the emissions of SOx. We have expanded the scope of our NOx and SOx reporting to incorporate emissions from leased facilities, and fleet vehicle emissions. Reductions in the number of fleet vehicles have resulted in overall decreases in SOx, while NOx has remained relatively constant.

The largest source of air emissions directly from our manufacturing processes is solvent use, which is the primary component of both volatile organic compounds (VOCs) and Toxic Release Inventory (TRI) compound emissions to air. Two of our new goals target reducing these pollutants. Our Green Chemistry and VOC reduction goals will lead to lower levels of toxic emissions in general and lower VOC emissions specifically. VOC emissions decreased over 15 percent from the 2009 baseline year, in large part due to certain processes being discontinued and improved emission tracking methods.

Our current emissions of ozone-depleting compounds, which are primarily due to minor leaks from temperature control systems, are small compared with other emissions from our sites and remain relatively constant. Nevertheless, we will continue to monitor them for improvement opportunities.

WASTEWATER EFFLUENTS

We are committed to providing effective wastewater treatment at our facilities to protect water quality.

Merck operates its own wastewater treatment plants at many production and research facilities. The wastewater from the remainder of our production and research facilities is sent to a local municipal wastewater treatment facility. At a few facilities that are new to Merck, we are in the process of providing on-site systems to treat all process and sanitary wastewater to meet generally accepted industry standards.

These and other wastewater projects are being funded through a capital portfolio that Merck established in 2011 to support improvements to water systems and wastewater infrastructure at our facilities worldwide. We anticipate executing approximately 50 wastewater-focused capital projects globally over the next four years. These projects will directly support our goals to reduce our discharge of both chemical oxygen demand (COD) and nutrients (nitrogen and phosphorus), and will also treat Merck compounds.

COD and nutrients are relevant indicators of wastewater quality from our operations. We report both on what we discharge to surface water, as well as what is discharged to municipal treatment plants, where additional treatment is provided. Our 2011 COD discharge of 3,166 metric tons was 47 percent lower than our 2010 discharge. Our nutrient load has also improved by 23 percent with 2011 nutrients in both discharges totaling 305 metric tons. These values predominantly reflect improved wastewater treatment technology at a facility in South America.

Since the early 1990s we have established compound-specific criteria and procedures to assure that our factory discharges do not contain residual product that presents a risk to human health or the environment. For more on pharmaceuticals in the environment, see the **Product Stewardship** section.

For information about our water use and conservation program, see the **Water** section.

WASTE

Merck is committed to implementing sustainable solid waste management practices, and we monitor waste generation and set goals to that end.

We prioritize our improvement efforts based on the internationally recognized waste hierarchy, which characterizes practices from most favorable to least favorable: prevention, reduction, reuse, recycling, energy recovery and disposal. To make sure the wastes we send off-site are managed in an environmentally responsible manner, Merck established a global waste management services vendor approval program in the late 1980s. To receive approval to manage our hazardous waste, product waste and other industrial waste streams, the commercial waste facility must demonstrate its ability to responsibly manage those waste streams.

PACKAGING DESIGN

Environmental sustainability is a priority with most major Merck Consumer Care customers, most notably Walmart. Thirteen different packaging design enhancements have eliminated 580K lbs of waste annually including plastic, paperboard, and PET. One example is the redesign of the A&D ointment jar from round to square, which uses 40 percent less plastic and translates to an annual reduction of 22.2K lbs of plastic. Another is the shrink wrapping process of Dr. Scholl's Custom Fit Orthotics that eliminates a corrugated inner carton, resulting in the elimination of 120K lbs of waste annually.

In 2011, Merck managed more than 197,000 metric tons of wastes from our operations. Of this, 81,000 metric tons required special handling, hereafter referred to as "hazardous," which includes (but is not limited to) hazardous, special, pharmaceutical product, and medical or infectious waste. This represents a 6 percent reduction in the amount of hazardous waste generated versus the prior year. The reduction is in large part due to certain processes being discontinued.

The primary component of our hazardous wastes is solvent from our manufacturing operations. Of the hazardous waste we generate, 30 percent is recovered off-site and reused either by Merck or by other industries. This represents a 7 percent increase in off-site hazardous waste recycling between 2010 and 2011. Another 28 percent is burned as a source of energy in industrial furnaces, such as cement kilns, or to generate power.

Most of the remaining hazardous waste is product or research waste that is not recyclable. Of the total hazardous waste generated, 35 percent is incinerated and approximately 3 percent of our hazardous waste (no liquids) is sent to landfills.

At a number of our facilities, we are able to reuse solvents on-site in our processes. This reuse lowers our manufacturing costs both by reducing the amount of new solvent we need to purchase and by decreasing the amount of waste solvents we need to transport off-site for treatment as hazardous waste. To reduce the amount of hazardous waste we generate, we have established a solvent use **goal**. For more about solvent use, **click here**.

We are also tracking our generation of other waste as we continue to reduce generation and increase our nonhazardous waste recycling rate. Because they are different in many ways from other nonhazardous waste streams, this year we are distinguishing industrial waste streams largely comprised of water treatment sludges and other liquid wastes from the more solid waste materials largely comprised of wood, glass, plastic, and metal. We generated approximately 50,000 metric tons of sludges and liquid wastes and 65,000 metric tons of other nonhazardous waste in 2011. We recycled 46 percent of the 65,000 nonhazardous wastes we generated in 2011.

We are taking efforts to conserve resources and reduce waste. Here are some examples from 2011:

- We composted 99 tons of food waste from four of our Northeastern U.S. facilities. Composting food waste allows us to reduce the frequency of trash pickups and helps to prevent the generation of methane, a potent greenhouse gas, from landfills.
- Our global managed print program continues to expand and help reduce our costs, energy use, paper consumption, and electronic waste. **Click here** to view a video about Merck's managed print partnership with HP.

SOLVENT USE

The life cycle of solvents are a significant part of our operational and supply chain footprint.

Solvents play a key role in the synthesis of our compounds, the formulation of final products, and the cleaning of equipment. Solvents are the primary component that we must control in our emissions, effluents and wastes and solvents, throughout their life cycle, are a significant part of our operational and supply chain footprint. Because of their significance, we have a strong focus on green chemistry and are targeting solvent use reductions instead of setting a hazardous waste reduction goal.

We have an active **green chemistry** program to design our processes to use less solvents and to reuse and recycle solvents. But when the recovery and reuse of regenerated solvents isn't practical, we try to find other beneficial uses for our spent solvents. We also employ in-process and end-of-pipe treatment technologies and controls to reduce our solvent emissions. We seek to use water-based methods for equipment cleaning when they are equally effective.

In 2011, Merck used more than 85 million kilograms of solvent in production and cleaning processes. The increase in solvent use in 2010 was due in large part to the purchase of a large manufacturing facility in Pennsylvania. The recent decrease is related to more facility closures and processes being shut down than were added over the year. In 2011 more than one-third of the solvents we used for manufacturing product and cleaning equipment were recovered solvents.

ENVIRONMENTAL REMEDIATION

Management practices for emissions, effluents and wastes have evolved significantly in the past 30 years.

With research and manufacturing operations dating back more than 100 years, some of our facilities were operating when there were few regulations and little understanding of good environmental practices. As a result, Merck has responsibility for remediation and has launched investigations and aggressive and appropriate clean-up projects.

For remediation and environmental liabilities, including formerly owned and operated sites, Merck spent $17 million in 2009, $16 million in 2010, and $25 million in 2011. In addition, Merck currently is a potentially responsible party at 20 multi-party Superfund sites in the United States.

PRODUCT STEWARDSHIP

Merck is committed to understanding and managing the environmental impact of our products, from discovery through manufacturing, patient use and disposal.

This commitment starts early in the drug development process and continues throughout the product life cycle. Ensuring that our products are designed, used and managed safely and responsibly is one of Merck's highest priorities. Our dedication to managing and communicating the impacts of our products on human health and the environment is unwavering, and we continue to deliver on this commitment through focused product stewardship initiatives.

At Merck, our product safety and stewardship programs are built on a foundation of sound, risk-based scientific assessment. Long before our products are commercially available, we carry out extensive environmental tests to evaluate and mitigate any potential environmental impacts due to discharges from our facilities and resulting from normal patient use. During the design phase, Merck scientists use green chemistry principles to reduce the environmental footprint of our products and our manufacturing processes. In addition, we strive to reduce the amount of packaging material and waste associated with our products, and we are working to make sure that our suppliers also employ responsible practices. Before we import, manufacture or move our products around the world, we also have procedures to ensure that we are in compliance with applicable global chemical policy regulations.

The scientists who support our product stewardship program are highly skilled in their fields and serve on many committees, professional societies and industry trade groups. They also have presented at forums worldwide to help promote the advancement and application of scientific research related to product stewardship.

Chemical Policy

At Merck, chemical management is critical in maintaining employee safety and protecting the environment. In order to ensure chemical safety in the workplace, we provide our employees with information about the identities and hazards of the chemicals in our operations.

Merck creates safety data sheets for all of our chemicals, to provide our employees and others with information on how to handle each substance in a safe manner, such as ingredients and potential hazards, as well as information on safe handling.

In addition, Merck complies with many chemical-registration regulations around the world, including:

- Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) (Europe)
- Measures for the Environmental Management of New Chemical Substances program (China)
- New Substances Notification Regulations (Canada)
- Toxic Substances Control Act (TSCA) (United States)

In compliance with these chemical-registration regulations, our scientists conduct tests and detailed assessments of the environmental and human health risks of our substances. Many registrations require a full report that includes details on product use, an environmental and health risk assessment designed around that use, as well as any risk-control measures that may be necessary in accordance with the requirements of applicable regulations.

ENVIRONMENTAL RISK ASSESSMENTS

In many countries around the world, an environmental risk assessment must be conducted and submitted to regulatory authorities as part of an official marketing approval or a new substance notification.

Because Merck markets products globally, our new products are assessed in a manner consistent with applicable global regulatory requirements.

We put our human drug substances through a battery of environmental "fate and effects" tests, which evaluate the potential impact of pharmaceutical residues in the environment. Tests are performed in independent research laboratories officially accredited to perform regulatory testing, follow protocols issued by the Organization for Economic Cooperation and Development (OECD) and are in full compliance with Good Laboratory Practice regulations. The European Medicines Agency (EMA) publishes detailed information on the human drug products it assesses in European Public Assessment Reports, which now include the results of environmental risk assessments.

Merck scientists also collaborate with other pharmaceutical companies, government agencies and universities to increase awareness and apply scientific methods to assess the potential impact of pharmaceuticals in the environment, and to increase the understanding of such impacts. For example:

- Merck joined with other pharmaceutical companies, Swedish stakeholders with environmental interests, and the Swedish Association of the Pharmaceutical Industry in establishing an environmental classification system for pharmaceuticals in Sweden. We voluntarily provide environmental risk data on our products to the Swedish system, which is publicly available **online** and updated on an ongoing basis.
- Merck scientists are working with government and university scientists from Canada on the Canadian Environmental Impact initiative. This initiative is developing environmental assessment regulations aimed at addressing risks to the environment and to human health posed by products regulated under the Canadian Food and Drug Act.
- Merck scientists participated in a multistakeholder group that provided recommendations and research ideas related to the potential impacts of pharmaceuticals to support environmental sustainability in the Baltic Sea region in Europe.

PHARMACEUTICALS IN THE ENVIRONMENT

Studies have demonstrated that trace concentrations of ingredients found in pharmaceuticals and other consumer products used by the general public are present in waters in Europe and North America.

The low levels of human medicines that have been detected come primarily from patient use resulting from a portion of medicines passing through the human body without being completely metabolized. These compounds then make their way into municipal wastewater treatment systems, where another portion may pass through without being fully degraded and may therefore be discharged into the environment in very small concentrations. To date, scientists have found no evidence of adverse human health effects from the trace levels of pharmaceuticals detected in the environment.

Merck has a formal **public policy position** on pharmaceuticals in the environment (PIE), which describes our efforts to work with government agencies, the scientific community and other stakeholders to understand and appropriately respond to this issue. We also participate in many stakeholder collaborations aimed at developing and implementing a science-based approach to evaluating and setting policy related to pharmaceuticals in the environment.

- Merck scientists have presented at several scientific workshops focused on pharmaceuticals in the environment, including the annual meetings of the Society of Environmental Toxicology and Chemistry and the Water Environment Federation
- Merck is also a sponsor of the **Water Environment Research Foundation (WERF)**, where the significance of trace constituents of consumer products, including pharmaceuticals, in the environment is the subject of numerous research projects, including research on new wastewater-treatment technologies to improve the removal of trace amounts of pharmaceuticals from wastewater discharges.

Although not a major source of pharmaceuticals in the environment, proper disposal of unused medicines is another important component of this issue, given that the disposal of medicines in latrines contributes to the trace concentrations detected in the environment. Through our membership with PhRMA (Pharmaceutical Research and Manufacturers of America). we have worked to develop and implement the **SMARxT Disposal Program**, designed to provide the general public with information on proper disposal of unused medicines.

NANOTECHNOLOGY

Merck supports the use of nanotechnology to develop innovative drugs, vaccines, and consumer products that address the unmet medical and wellness needs of people and animals.

Nanotechnology broadly describes the use of very small materials—ranging from the extreme size reductions of normal materials to unique, minute substances such as carbon nanotubes and other exotic materials.

We follow advances in nanotechnology because we are always looking for ways to improve patient care as well as protect the environment and the health and safety of our employees. The testing required for all drugs will ensure that nano-based pharmaceuticals are safe and effective for patient use. Based on our current knowledge of nanoparticles, our existing methods for assessing risks to workers and the environment are valid, and our existing controls are well suited to preventing employee exposure.

We are actively pursuing nanotechnology through internal research and development, and through external collaborations with academia, biotechnology companies and companies that support the drug discovery and development of novel therapeutics. Nanotechnology may be used in such applications as therapeutic targets; biomarker identification; analytical test identification; enhanced drug delivery to specific tissues and tissue compartments; molecular imaging to monitor the fate of therapeutic agents; and the development of novel therapeutic approaches and molecules.

For example, Merck coats a new class of experimental drugs (siRNAs) with lipids for efficient delivery to the insides of cells, where siRNAs are active. One of our products, EMEND® (aprepitant), also uses a nanoscale milling approach to make its granules very small so that they are more easily absorbed by the digestive tract. And in our Animal Health division (Intervet), nanoscale milling is used for the active ingredient in PANACUR® (fenbendazole) to produce a stable and more easily re-suspendable formulation.

Finally, some Coppertone® products from the Merck Consumer Care Division contain micronized zinc oxide, which provides improved broad-spectrum UVA/UVB protection from the sun's damaging rays, reducing the risk of sunburn, early skin aging and skin cancer. Nanoparticles of titanium dioxide (TiO_2) and zinc oxide (ZnO) have been extensively studied, and current scientific data, including our own studies, demonstrate that skin contact with these particles does not represent a health concern.

PACKAGING

Our packaging is designed to meet the needs of our customers and to preserve the sterility, purity, efficacy and physical integrity of our products.

We are exploring ways to reduce the environmental impact of our product packaging. As we do so, we are making sure that the changes will neither decrease the amount nor degrade the quality of product that patients receive. An increase in product waste would offset the environmental benefits of packaging improvements.

We have provided training and tools to help our staff make more environmentally sustainable packaging choices. We will measure the success of our near-term efforts through our 2015 packaging goals, which are aligned with two priorities—reducing our use of polyvinyl chloride (PVC) and increasing our use of sustainable (certified or recycled) fiber.

This year Merck will be compiling our first set of packaging goals data and will continue to work to identify and implement the projects necessary to meet our goals.

Examples of sustainable packaging improvements:

- **Vaccines Shipper Take Back Program in the U.S.**
- **Vaccines website**
- Our AFRIN® (oxymetazoline nasal spray) and CORICIDIN® HBP products are now packaged using 100 percent recycled carton board. Based on the Environmental Paper Network's Paper Calculator, this change:
  - Saves more than 9,000 trees
  - Conserves the amount of energy equivalent to that used by 50 homes annually
  - Prevents greenhouse gas emissions equivalent to taking 100 cars off the road annually
  - Avoids significant particulate, hazardous air pollutant, and volatile organic compound emissions

For more information about our waste reduction efforts, **click here**.

Packaging Partnerships

GreenBlue Sustainable Packaging Coalition (SPC): The Sustainable Packaging Coalition (SPC) is a project of GreenBlue, a nonprofit that equips business with the science and the resources to make products more sustainable. The SPC is an industry working group dedicated to a more robust environmental vision for packaging.

Australian Packaging Covenant (APC): The APC is a voluntary initiative by government and industry to reduce adverse environmental effects of packaging. It is designed to minimize impacts arising from the disposal of used packaging, conserve resources through better design and production processes and facilitate the re-use and recycling of used packaging materials. All signatories to the Covenant recognize that a cooperative approach between industry and all spheres of government is essential to success.

GREEN CHEMISTRY

Merck believes that green chemistry is fundamentally good for business. We apply green chemistry principles to our pharmaceutical research and manufacturing activities.

Our scientists and process engineers perform early-stage pharmaceutical-manufacturing process analysis to identify opportunities for waste minimization, recycling and process streamlining. This work has led to innovative catalysis chemistry, which significantly reduces the use of raw materials, the generation of both hazardous and nonhazardous waste, and the use of energy and water in pharmaceutical production.

We provide our scientists with both training and tools that support greener process design. In 2011, among many other efforts, we launched a solvent selection guide, implemented a Green Chemistry and Engineering e-Learning module, and hosted the first Green Chemistry Symposium since the merger.

Merck's 2011 Green Chemistry Symposium featured two keynote speakers:

- Nobel Prize winner in Chemistry, **Professor Ei-ichi Negishi**
- Director of the ACS Green Chemistry Institute, Dr. Robert Peoples

Recently, we have increased our focus on biocatalysis innovation, such as enzyme immobilization techniques that enable the use of enzymes in a concentrated solvent environment. This innovation provides us with several advantages compared with soluble enzyme chemistry carried out in aqueous reaction environments, including:

- Reduced waste
- Decreased cost
- Higher volumetric productivity
- Enzyme reuse
- Continuous processing
- Simplified manufacturing syntheses

Merck has also begun calculating our process mass intensity (PMI)—the kilograms of raw materials used to produce one kilogram of pharmaceutically active product—as an indicator of process efficiency. Measuring PMI is a standard approach being used by the ACS Green Chemistry Institute's Pharmaceutical Roundtable. PMI is calculated for all steps in the process of making a product, including those conducted by external suppliers.

We are calculating PMI for our top 15 APIs (active pharmaceutical ingredients), which corresponds to more than 90 percent of products manufactured by volume. In addition, we are calculating the PMI of all compounds in development in order to drive process intensification and waste minimization prior to the launch of new products. Once we have established this baseline PMI, we plan to set improvement targets.

Since the establishment in 1996 of the annual Presidential Green Chemistry Award by the U.S. Environmental Protection Agency, Merck is the only pharmaceutical company to have been recognized three times.

Merck is also a founding member of the **American Chemical Society's Green Chemistry Institute® (ACS GCI) Pharmaceutical Roundtable**, a partnership between the ACS GCI and member pharmaceutical companies. Roundtable members work together to create green chemistry tools and to support research on applying green chemistry to pharmaceutical discovery and production processes.

For more information about our efforts to increase use of recovered solvents and prevent waste, **click here**.

MERCK
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POSITIVE WORK ENVIRONMENT

A positive working environment is essential for employees to achieve their potential. It helps attract new employees to Merck and motivates them to stay.

To be a leading healthcare company and a high-performing organization, we must make sure that our workforce operates at the best of its abilities. That's why we provide numerous opportunities for employee development and professional growth; competitive compensation and benefits; a focus on health and safety; and a vibrant approach to diversity and inclusion. Our efforts to build a positive and high-performing working environment are based upon the following principles:

- We are a unified company, with all employees sharing in the mission of improving global health
- We share a strong core of ethics and integrity
- We put patients and customers first
- We value diversity and inclusion as essential, integrated elements of our culture and leadership
- We demonstrate scientific, business and operational excellence
- We are results-driven and highly competitive
- We are empowered to make decisions, and we hold ourselves accountable for the outcomes
- We innovate and take appropriate risks
- We value feedback and learn from our successes and our mistakes
- We encourage debate and communicate candidly and respectfully
- We are efficient, agile and responsive to change

Leadership Behaviors, Employee Development and Professional Growth

In 2010, Merck established new employee behavior standards closely aligned with the company's business strategy and Code of Conduct. These seven Leadership Behaviors apply to every Merck colleague and support us in our efforts to consistently perform at a level of excellence, achieve our strategic goals and help us create and sustain our high-performance culture.

We also conduct a rigorous and transparent annual performance review of all employees at all levels to guide company decisions relating to compensation and rewards. Employee performance is measured, in part, by how well employees demonstrate our Leadership Behaviors. In this way, we seek to emphasize not just what an employee achieves, but also how he or she achieves it. This is so critical to the company that the annual incentive bonus of management-level employees is determined, in part, by demonstrated leadership that is consistent with the behaviors.

In addition, we conduct an annual employee development planning process in which managers discuss with each of their employees his or her strengths and development needs. The manager and employee then jointly create an action plan to strengthen areas in need of development and build new leadership skills.

Diversity and Inclusion

We believe that our human and organizational differences, when managed successfully, will make us a more innovative, agile and profitable company. By leveraging our differences, we can build and sustain a workforce and culture in which people are engaged and motivated to work at the highest level of their individual and team capabilities. For more information, **click here**.

Work-Life Integration

Merck takes a comprehensive and holistic view towards work-life integration. We focus on a broad array of programs to appeal to employees at all stages of life. Employees who manage multiple responsibilities in the home and in the workplace, employees who are caregivers to elderly parents, employees with visible or non-apparent disabilities, or employees who have religious obligations—indeed, all employees, benefit from greater work-life integration offered at Merck. For more information, **click here**.

Wellness

A healthy and safe workforce is a more productive workforce. Merck provides employees with a wide variety of health programs in alignment with the highest standards of local medical care and regulatory requirements to enhance their health and well-being. Through our various wellness programs, we offer a range of confidential personal tools, programs and activities to support an individual's health choices and to build a work culture that reinforces healthy, safe behaviors. U.S.-based employees can also access our Employee Assistance Program, which provides free short-term counseling on health matters, legal consultations and financial counseling.

Worldwide, we provide timely accommodations for colleagues with a disability and engage the employee as part of the interactive assessment process in determining the appropriate accommodation to meet their individual needs. We also engage in preventative measures as well as closely tracking accidents, injuries and illnesses, so that we can address problems promptly and work toward eliminating occupational injuries and illness. For more information, **click here**.

Employee Giving

Merck employees around the world are actively engaged in their communities. The opportunity to do so benefits employees, their communities and Merck. For this reason, Merck offers a number of programs through which employees can contribute to the communities in which they work and live. For more information, **click here**.

Partnership for Giving: The Merck Company Foundation matches U.S., including Puerto Rico, employee and retiree contributions, up to $30,000 per donor per year, to eligible U.S. nonprofit organizations. Our support for employee contributions to worthy causes not only assists thousands of organizations but also expresses our engagement and support of our communities.

Employee Volunteering: Our Global Employee Volunteerism Policy is designed to expand our culture of volunteerism and to encourage employees worldwide to volunteer. Merck considers active employee volunteering as a way to engage with individuals and groups in our communities and hopes to expand opportunities for employee involvement in local communities.

Merck also has numerous local volunteer programs around the world addressing a variety of social challenges, from "Love in Action" in Korea, "ARTZ (Artists for Alzheimers')" in France, "Roll Up Your Sleeves" in the Netherlands, and "Street Law" in New Jersey.

Merck Blood Drives: For employees who wish to give blood, Merck runs regular blood drives at many of its sites around the world. For more information on these and other programs, **click here**.

Employee Communication & Engagement

We offer many ways for employees to comment on Merck's mission, goals, business strategy, performance and work environment. For example, an employee opinion survey provides global feedback that management rigorously analyzes and uses to inform decisions.

We also conduct quarterly internal business briefings via live webcasts, which are then archived. In addition, Merck's CEO and Executive Committee members meet regularly with smaller groups of employees for informal breakfast and town hall discussions.

For access to company news and videos, the company has a global enterprise portal, known as "Sync," including divisional and functional news channels where organizational communities are able to share interests, messages and ideas online. In addition to the Sync portal, other employee communications vehicles include quarterly employee business briefings, town halls, and email communications from senior management, as necessary, to communicate more broadly with employees worldwide.

If our employees have any concerns or wish to report behaviors that seem at odds with **Merck's Code of Conduct**, they can contact the Merck Ombudsman and/or the Merck AdviceLine.

For more information on how we communicate and engage with our employees, **click here**.

PERFORMANCE & COMMITMENTS

POSITIVE WORK ENVIRONMENT SUMMARY	2009	2010	2011
Number of employees (approximate)	100,000	94,000	88,000
Total compensation paid to employees/payroll, excluding benefits (US$B)	NA	9.0	8.8
Employee Categories Covered by a Standardized Performance Appraisal Process			
Executives[1]	100%	100%	100%
Middle management	100%	100%	100%
Line supervisors	100%	100%	100%
Individual contributors[2]	100%	90%	93%
Turnover			
Overall turnover rate[3]	5%	11%	14%
Voluntary turnover rate	NA	6%	6%
Unavoidable voluntary turnover rate	NA	1%	1%
Involuntary Termination Rate	NA	5%	7%

[1] "Executives" refers to the first two levels below the Chief Executive Officer.
[2] Does not include employees who are covered under a collective bargaining agreement.
[3] Includes all types of turnover, including restructuring.
NA: Data not available

MERCK
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TRAINING & EDUCATION

To create a high-performance organization and stimulate individuals to achieve their full potential, we offer a wide range of training and educational programs and resources.

Each of Merck's three main divisions—research and development, sales and marketing, and manufacturing—as well as major support functions, such as finance and global services—have established training organizations to build the required functional and technical skills.

To support these organizations, we sponsor a curriculum that builds leadership and management skills for all levels of employees globally. This curriculum includes:

iLead—Where leaders come to learn
The iLead website houses approximately 7,000 learning resources that employees at all levels can use to develop their leadership skills. Resources are available in the following formats: "On-Demand" web-based modules, classroom programs, on-the-job development suggestions, articles, tools and video podcasts.

Management Foundations
This is a comprehensive program that focuses on building the core, common and critical knowledge and skills for new managers. Using a variety of learning methods, new managers focus on what they will need to know and do to be effective in their role, and to gain the knowledge and skills to manage others.

Team Development
There is a suite of programs for team development and team building, ranging from formal learning experiences to "action learning"-based activities that help teams develop skills and competencies as they pursue real business goals.

You & Your Success
This course aims to help employees early in their careers align personal and professional objectives with practical strategies for achieving both.

Merck Sigma
Based on the Six-Sigma approach, this course is designed to simplify processes, maximize efficiency, reduce errors and minimize risks. Merck conducts regular Lean Six-Sigma and change management training courses for employees, which lead to "Yellow Belt," "Green Belt," "Black Belt," "Executive Belt" and "Change Execution" certification in Merck Sigma tools and methods.

Advancing Employee Education
Merck's U.S. Educational Assistance program encourages employees to learn more for their current assignments and/or to help them prepare for new assignments. The program includes financial assistance for relevant undergraduate and graduate education.

MERCK
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COMPENSATION & BENEFITS

In 2011, Merck paid a total of $8.8 billion in payroll expenses, excluding benefits.

Merck's global compensation and rewards program also includes an incentive plan of cash awards based on performance.

Overall compensation at Merck is directly dependent on our corporate performance, as well as on specific internal metrics related to the performance of an individual employee and his or her functional group. Employees at all levels, except those subject to a collective bargaining agreement, have objectives against which they are assessed by their supervisor. Information on Merck's global compensation and rewards program is available to all employees on the company's portal.

Benefits

In many countries, we offer health insurance, life and injury insurance, disability insurance, retirement income benefits and insurance for business travel. In the United States, employees also can opt for tax-free Flexible Spending Accounts for health spending and/or dependent care costs. In addition, in many countries where legally permitted, we extend healthcare and various insurance benefits to employees' same-sex domestic partners and their partners' eligible dependent children.

Worldwide, Merck offers retirement benefits that are competitive with our peers and general industry. In the United States, for example, we offer a defined benefit pension plan, as well as a 401(k) plan with company-matching contributions. To assist in personal investment decision-making, all employees are offered the Ernst & Young Financial Planning Program at no cost. And employees who are at least age 55 and have at least 10 years of service are eligible for subsidized healthcare benefits at retirement.

Other Benefits and Services

At certain Merck sites, including company headquarters in Whitehouse Station, New Jersey, employees can see a healthcare professional on-site, usually on the day they need to, for such services as immunizations and treatment for minor aches and pains. At many of our sites, we also provide services such as subsidized cafeterias, oil change for automobiles, child care, dry cleaning, and gyms and fitness classes. In the United States, our employees can bank through the Merck Employees Federal Credit Union, which offers competitive interest rates on savings accounts and lending. Merck established the Credit Union in 1936 to help U.S. employees during the Depression.

FLEXIBLE WORK ARRANGEMENTS

Today's professionals are interested not only in intellectually challenging work and the opportunity to contribute to company goals, but also in finding work environments that are flexible to personal life needs and interests.

In short, they desire work-life integration.

With this in mind, Merck has developed work-life integration programs that are innovative and that meet the needs of today's talent and employee pool, while enhancing our reputation as an employer of choice.

Merck takes a comprehensive and holistic view of work-life integration. We have instituted a broad array of programs to appeal to employees at all stages of life. Employees who manage multiple responsibilities in the home and in the workplace, employees who are caregivers to elderly parents, employees with visible or nonapparent disabilities, and employees who have religious obligations—indeed all employees—benefit from the greater work-life integration offered at Merck.

We recognize the following benefits that a holistic work-life effort provides:

- A work environment that attracts talented applicants
- Improved employee performance and reduced absenteeism
- Increased employee engagement
- Higher employee and customer loyalty
- Decreases in sick leave
- An enhanced reputation in the marketplace
- Lowered staff attrition rates
- Higher levels of teamwork and collegiality
- A perception of the organization as genuinely innovative

Global Flexible Work Arrangements

Merck believes flexible work arrangements offer a different and smarter way of working that enhances employees' commitment to the company, increases productivity and makes employee teams more competitive. The company has had a flexible work arrangements policy for several years in the United States, and globally since 2008.

In developing our global Flexible Work Arrangement Policy, we've challenged traditional assumptions about where and how work can and must be done. Flexibility reflects our belief that job effectiveness is determined by employee performance and results, not the number of hours one is seen in the office. What is produced or accomplished is more important than when or where the work is done.

Employees and managers work together to assess the opportunities and challenges of a proposed arrangement. While the overall process should be collaborative, managers are accountable for making the final decision in light of business requirements, recognizing that some positions may not lend themselves to a flexible work arrangement. All regular full- or part-time employees are eligible to apply for a flexible work arrangement, which includes:

- Part-time Work: Employees' workload and hours are decreased to less than the standard workweek requirements along with commensurate reduction in benefits and compensation.
- Job Sharing: Two employees on reduced schedules and workload share the overlapping responsibilities of one full-time position; benefits and compensation are reduced accordingly.
- Flextime: Employees with full-time job responsibilities modify the start time and quit time of a standard day while being present for departmentally established "core hours" (hours of mandatory attendance, such as 10:00 a.m. to 3:00 p.m.), if any.

- Compressed Work Weeks: Employees compress full-time job responsibilities into fewer than five days per week or 10 days per two weeks.
- Telework: Employees perform full-time job responsibilities up to several days a week at sites other than their primary location—usually their home or a satellite office.
- Remote Work: Employees perform full-time job responsibilities working primarily as a home-based or mobile employee, with limited presence in a regular company facility.
- Other options, including hybrid arrangements, seasonal work, project-based approaches, etc., may also make business sense. Employees and managers are encouraged to consider and pilot other alternatives.

Thoughtful Communication with Employees and Managers

To ensure deep- and broad-scale awareness of all Merck programs, the company uses a thoughtful, integrated communications approach to help all employees manage work-life integration. We provide training to managers in helping employees find new ways of working to achieve business goals, while supporting employees' work-life effectiveness, and the use of internal communications, employee networking events, mentoring, and leadership development forums to maintain high levels of employee morale, enthusiasm and productivity.

Merck also has a vibrant website supporting work-life effectiveness, where employees can build awareness and take advantage of the wide variety of programs that Merck offers.

In addition, Merck offers enhancements to existing work-life integration programs to help employees manage work-life issues. They include:

- Parental Leave: One week of paid parental leave for the birth or adoption of a child.
- Free Commuter Transportation Service: A free commuter/shuttle service from specific locations near Merck headquarters in Whitehouse Station, New Jersey, enabling employees to save on transportation costs and commute time while reducing their carbon footprint.
- Summer Hours: Providing greater flexibility, Merck offers employees the opportunity to have reduced week hours during the summer. Specifically, eligible employees are able to work nine-hour days Monday through Thursday, and the final four hours on Friday (departing no earlier than noon).

Dependent Care

Dependent-care services at Merck are provided by LifeCare, through which specialists provide subsidized care for children and adults as a backup. Employees are eligible for 15 days' usage per dependent per year for a nominal out-of-pocket fee. Employees can also take advantage of significant online resources available **here**.

College Coach—an educational counseling service that offers a comprehensive menu of education topics and helps employees manage their professional and family responsibilities through workshops, expert counseling, and Web-based assistance. The program helps employees and their families reach their academic goals—reducing stress and keeping employees happy and productive both at home and at work.

Special Needs: Autism Spectrum Disorder (ASD) Program—for employees and their families as they plan for and navigate school and college options for students with diagnosed ASD and related conditions. Once qualified, employees can receive five hours of personalized counseling and participation in one live webinar.

Website for Exceptional Caregivers—provides online caregiver support and online elder-care support programs on a range of topics and resources relating to children with special needs.

Program for Elder Caregivers—includes free online educational courses that Merck sponsors for employees who have the responsibility of caring for an older relative. The program includes: Empower Online (an eight-week online elder-care support program that offers tools for self-care and self-assessment as a caregiver) and Making Sense of Memory Loss (an online class for those who care for someone in the early, middle or late-to-final stages of memory loss, whether that individual has received a diagnosis of Alzheimer's or related dementia).

Adoption Assistance—provides reimbursement of up to $10,000 for eligible adoption-related expenses.

Employee Assistance Program—offers access to confidential, professional assessment, referral, counseling and educational services.

ENGAGING EMPLOYEES

Historically, employee engagement at Merck is much higher than the average at most U.S. companies.

We strive to foster this engagement in many ways: by promoting a positive work environment, by requiring ethical business practices, and by communicating proactively with our employees.

Also critical to our success is employee feedback. As we do with our external stakeholders, we work to understand our employees' concerns, needs and thoughts about the company's strengths and weaknesses, and we incorporate these findings into our strategies, processes and programs to help us achieve our business goals.

And since our employees are our most prominent and valuable ambassadors with most of our external stakeholders, we make sure that we communicate important news about the company to employees as quickly as possible and through the most appropriate channels. Employees are generally notified within minutes of most major external announcements.

For example, through our global enterprise portal, known internally as "Sync," employees can gain access to company news and videos, divisional and functional news channels, and organizational communities that allow them to share interests, messages and ideas online. Other employee communications vehicles include quarterly Employee Business Briefings, Town Halls, and email communications from senior management, as necessary.

We also enable employees to give their feedback to our online news site and via brief, three-to-five-question surveys and open-comment forms attached to key communications. Soliciting employee feedback on the subject of the communication in real time gives us the information we need to close knowledge gaps and address employee concerns. Such direct employee feedback has resulted in "meet and greet" sessions hosted by our CEO and our Executive Committee, which give employees yet another opportunity to share information with senior leaders in a more personal setting.

We conduct global employee briefings every quarter. Our CEO and members of the Executive Committee speak to employees about how we are fulfilling Merck/MSD's mission and goals. These encouraging and educational sessions cover topics such as the quarterly performance update, pipeline progress, customer stories, and anticipated product developments.

Employee Surveys

As part of our mission to maintain a satisfying and productive work environment, Merck routinely surveys all employees to learn their perspectives on the business and how we are responding to the needs of our workforce. We also conduct an annual employee opinion survey, the Merck/MSD Voice, with content based on Merck's business needs.

Offered in 20 languages, the survey helps Merck leaders and managers understand employees' perspectives on our culture and its effect on the company's ability to meet our business objectives, as well as what drives employee engagement. We communicate highlights of the survey results through meetings with our employees, in our employee publications, on our intranet and through emailed summaries.

Our 2011 results showed that employee confidence in Merck's mission and future as a healthcare leader remains strong. Results indicate that employees are most engaged by the sense of purpose that their work provides. However, employees indicate that engagement can be increased by greater transparency in the link between employee input and senior leader decision-making processes as well as clearly defined career paths.

Executive Committee members and leaders of the company's strategic change initiatives use the results of our annual surveys as part of their ongoing strategic planning. Based on 2010 results, for instance, senior leaders actively made themselves more accessible to employees, and these efforts were reflected in the 2011 results.

Other Resources for Employee Feedback

In addition to the employee surveys, our ombudsmen within Merck's Office of Ethics listen to employee concerns in confidence and, when necessary, take action. Our anonymous help line, which operates in accordance with applicable legal standards for employee-based hotlines, is available 24/7 to listen and provide advice to employees worldwide. **Learn more**.

PERFORMANCE & COMMITMENTS

EMPLOYEE ENGAGEMENT	2009	2010	2011
Response rate to Merck/MSD Voice Survey	NA	64%	63%
Percentage of employees 'fully engaged' or 'engaged'	NA	51%	49%

NA: Data not available

Performance

In September 2011, 63 percent of Merck employees (more than 55,000 respondents) worldwide completed the Merck/MSD Voice survey. This participation rate is considered high by the independent organization that administered the survey on Merck's behalf. The September organizational culture results were on a par with those obtained in previous administrations. These findings showed that Merck's strengths remain:

- A clearly articulated sense of purpose and direction
- Strong core values
- High levels of employee involvement

Highlights from September 2011 Responses

Organizational culture results are reported as a percentile score compared to financially high-performing organizations. Merck's scores are particularly high with regard to our core values, with scores above the 80th percentile (i.e., scores as good as or better than 80 percent of financially high-performing organizations in the following areas.

- There is an ethical code that guides our behavior and tells us right from wrong (88th percentile)
- There is clearly a right way and a wrong way to do things at Merck (93rd percentile)
- There is a clear and consistent set of values that governs the way we do business. (80th percentile)
- Ignoring core values will get you in trouble. (83rd percentile)

Areas for Improvement

- Customer Focus: Employee feedback indicated the need to help all employees develop a deeper understanding of customer needs and concerns, and to develop a more rigorous process for integrating customer interests into our decision-making.
- Creating Change: Employee feedback indicated that the company needs to be more flexible and adaptable in how we get things done and to be more responsive to changes in the business environment.
- Capability Development: Employee feedback suggested the need to invest more in developing the capabilities needed to execute effectively against current and future business challenges.

Our next Merck/MSD Voice administration will take place in the third quarter of 2012 as part of our strategic planning. We will continue to measure organizational culture and employee engagement; however, we are moving to an approach that is specifically aligned with Merck's strategic goals. Based on work done with our Executive Committee, the new approach will measure and drive actions on the cultural aspects of Customer Focus, Innovation (i.e., Courage & Candor and Rapid, Disciplined Decision-Making), and Reputation and Trust to drive employee engagement and achieve our strategic goals. We strive to score as well as or better than financially high-performing organizations on these dimensions of organizational culture. For more information on Merck's strategy and approach to ethics, **click here**.

MERCK
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WELLNESS

Aligning with our company's business mission to protect and promote health, Merck is committed to providing a safe and healthy workplace for its employees around the world.

We want to ensure that our employees return home from work every day healthy and safe. As part of this commitment, Merck expects every employee to conduct his or her job without compromising personal safety and health, or the safety and health of other members of our workforce and the communities in which we operate.

We provide employees with a wide variety of **health programs** reflecting the highest standards of medical care and regulatory requirements. We also take preventive actions and closely track workplace accidents, injuries and illnesses, so we can address problems promptly and work toward eliminating occupational injuries and illnesses.

Merck believes there are many benefits to this approach. First, health is a key ingredient for optimal workforce performance. Whether at work or at home, sickness or injury often can affect a person's ability to perform and contribute effectively. Because our business is health, we believe we must lead by example. We also believe that a constructive approach to employee health helps to recruit and retain top talent.

Finally, understanding what health issues most affect Merck's workforce can help us make the right investments to improve the health of our people.

Since environmental, health and safety (EHS) matters are closely connected, we manage them collaboratively across numerous functions. A key element of our EHS management system is the monitoring of health and safety risks and performance. Health and safety performance is an important consideration in our annual assessment of scorecard performance, which is tied to compensation.

In this section, we provide data on **Employee Health** and **Employee Safety**.

MERCK
Be well

EMPLOYEE HEALTH

As a global healthcare company, Merck is committed to helping employees manage and improve their health and well-being.

Merck's Integrated Health Management department works closely with the Global Benefits department to provide a wide range of health and wellness services and programs.

These offerings cover the continuum of care, for those who are well, those at risk, those with acute or chronic illness, and those requiring complex or catastrophic care. Many of these services and programs are provided at on-site employee health clinics or through programs offered by vendors in conjunction with our benefits coverage. Health services and programs available to Merck employees include:

LIVE IT

In 2011, Merck launched "LIVE IT," an initiative that brings together all of Merck's health and wellness offerings under one integrated program and provides employees and eligible family members access to a broad suite of helpful health and wellness tools, programs and information.

In June 2012, the company introduced a new healthcare resource through LIVE IT called Health Advocate. Health Advocate is a program designed to help employees and their families navigate the complicated healthcare and health insurance system. Health Advocate is designed to make employees lives easier by saving hours of time, with activities such as:

- Helping resolve complicated medical and dental insurance claims
- Finding doctors, providers or facilities
- Scheduling appointments for physicians, treatments and tests
- Securing second opinions
- Assisting with eldercare and Medicare issues
- Getting cost estimates for medical procedures
- Assisting in the transfer of medical records
- Researching and locating the latest treatments
- Locating work-life resources

The program is available to employees at no cost, and is also available to employees' parents and parents-in-law for any healthcare or eldercare issues they may be facing.

Our Website

Merck offers a health and wellness website to U.S.-based employees and their dependents, which features a health assessment, online interactive health tools and information, health coaching programs and more. The website is designed to raise awareness about health issues and motivate employees to manage and improve their health and well-being. It includes topical health summaries based on scientific evidence and links to reliable healthcare information.

Immediately after completing the online health assessment, an employee receives a customized report that summarizes his or her health status and offers suggestions for personal goal setting. Anyone who takes the assessment and wants to work on an identified health risk has access to a lifestyle coach, who provides advice and encouragement and monitors progress regularly. Participation in the health assessment and other programs is voluntary and confidential.

On-site

Many Merck clinics offer employees the opportunity for lipid, blood glucose and other laboratory services, including blood collection ordered by a personal physician. To support new mothers returning to work, clinics offer worksite lactation programs. "Lunch and learn" programs and site-based wellness activities, including walking and weight-reduction programs, are also available.

Cafeteria Collaboration

What we eat and drink affects our daily physical and mental well-being and our longer term health and resilience. To contribute to a healthy work culture, we work with our on-site food vendor at most of our U.S. facilities to increase the availability and visibility of healthy food choices and to raise awareness about proper nutrition. Employees also receive discounts for healthy food purchases. In addition, many Merck sites globally have cafeterias that offer healthy food options and nutrition education.

Fitness Centers

Merck offers access to on-site fitness centers at several large U.S. facilities, as well as at other Merck/MSD facilities around the world. In the U.S., professional fitness managers organize programs and events to encourage employees to eat well, manage their weight, exercise and participate in various fitness challenges and other special events.

Occupational Health

As a global organization, Merck has several different operating divisions and work assignments—each with its own range of requirements. Particular work assignments may involve potential exposure to one or more occupational hazards, such as noise, mixtures of chemicals or hazardous biological compounds. The company maintains a continuing and concerted effort to assess and control workplace hazards (chemical, biological and physical) and to make sure that each employee's work assignment is safe and consistent with his or her evaluated capabilities.

Occupational health programs are developed and implemented based on identified health risks and applicable regulatory requirements. In the event that an employee becomes injured or ill while performing his or her job, we have programs in place for treatment and rehabilitation.

Work-related Injury and Illness Management

Merck's Global Employee Health professionals are clinically trained and dedicated to providing efficient and effective quality healthcare for employees who become injured or ill as a result of their work. They advise and coordinate healthcare with providers or agencies to ensure a smooth treatment-and-recovery process, while complying with both company and applicable regulatory record-keeping requirements.

Acute Episodic Health Care

Most Integrated Health Management clinics provide non-work-related, acute, episodic health care, including the diagnosis and treatment of minor non-occupational illnesses or injuries, health maintenance counseling and appropriate referral to specialty services.

Disease Management

Merck offers a voluntary disease management program that offers confidential professional support for ongoing treatment and care for most U.S. employees and their dependents with specific medical conditions. The goal is to help individuals achieve optimal health by providing evidence-based medical information and self-care guidance.

Treatment Decision Support

Merck also offers a voluntary care management program, which gives U.S.-based employees and their dependents access to expert second opinions for complex or critical illnesses, or options regarding the need for surgical or nonsurgical treatments and procedures. The goal is to provide a full range of options so employees can make the most informed decisions about their course of therapy.

Disability Management

Our Integrated Health Management Group works with external vendors in the U.S. to develop and implement short- and long-term disability management and return-to-work policies and programs. Optimizing the health and productivity of our employees is a key goal of these efforts.

Business Travel Program

Merck is concerned about the health and safety of our employees who travel on business, especially to international locations. Integrated Health Management maintains up-to-date information about infectious diseases that are prevalent in all countries and their required immunizations. Business travelers are given information on health conditions in the country of their destination, along with a traveler's guide, a travel kit containing over-the-counter medications they may need while traveling, any required immunizations, and an international emergency travel-assistance card.

Employees may also consult with an Integrated Health Management-licensed healthcare provider for specific travel-related prescription medications that may be needed during travel, possible preventive medical care prior to departure, information on the availability of medical care in the country of destination, and the possibility of medical care after return, as needed.

Annual Flu Shots and Pandemic Flu Planning

Most Merck sites around the world offer employees annual flu shots. In the United States, Integrated Health Management provide annual flu shots at no cost to employees at site-based employee health clinics. With guidance from Integrated Health Management, most Merck sites have also developed site-specific pandemic flu preparedness plans, employing a variety of countermeasures that focus on heightened awareness and tactical procedures.

HIV and AIDS, Tuberculosis and Malaria Workplace Policy

Merck recognizes that infectious diseases represent major healthcare burdens worldwide and pose an unprecedented challenge to people around the globe, including Merck employees, their families and the communities in which we operate. Three diseases alone—HIV and AIDS, tuberculosis (TB), and malaria—are pandemics responsible today for approximately half of infectious disease mortality.

These diseases impose a significant and destabilizing social, economic and health burden on nations, communities and families, especially when there is inadequate access to treatment. The company believes that all of our employees should have access to prevention, care and treatment for HIV and AIDS, TB and malaria. Since 2005, we have had in place a corporate policy to provide benefits to our employees where local access to HIV, TB and malaria prevention, care and treatment is inadequate.

Smoking Policies

The majority of Merck sites around the world have either a no-smoking policy or a smoke/tobacco-free policy in place. These policies send a strong message that the company is committed to promoting healthy lifestyles and to protecting its employees and visitors from the harmful effects of tobacco.

Automatic External Defibrillator Program and Emergency Response

At many Merck sites, on-site clinic staff responds to medical emergencies while also working with volunteers who help as responders. Integrated Health Management provides direct oversight for automatic external defibrillators and associated training, located at many of our sites in the U.S.

Vaccinations

Merck's on-site clinics in the United States, as well as many around the world, offer employees both occupational vaccinations (including travel-related vaccinations) and non-occupational vaccinations for such diseases as pneumonia, shingles, and cervical cancer).

EMPLOYEE SAFETY

As a global healthcare company, Merck strives to provide a safe and healthy workplace.

Merck is committed to providing a safe and healthy workplace for all of our employees around the world. We also expect all employees to do their jobs without compromising their own safety and well-being or that of our workforce or the communities in which we operate.

RECORDABLE INJURIES BY CAUSAL FACTORS 2011

Slips/Trips	23%
Motor Vehicle	15%
Struck Against/By	14%
Carrying/Lifting/Pushing/Pulling/Bending	17%
Repetitive Motion	8%
Chemical/Biological Exposure	6%
Reaching/Twisting/Turning	6%
Physical Exposure	4%
Caught On/In/Between	5%
Other	2%

Merck strives to eliminate work-related injuries, illnesses and unplanned events from our global operations by complying fully with all applicable country and local safety laws and regulations. We have developed comprehensive Environmental, Health & Safety (EHS) programs as part of an overall management system to help our operations achieve these goals.

EHS professionals at our operating sites and in our business groups collaborate with line management in the implementation of our EHS programs, supporting site-specific procedures and training to ensure compliance and to address potential safety risks.

In addition, most of our manufacturing and research sites have active safety committees that discuss safety issues with employees and implement awareness initiatives that help promote a safety culture.

Globally, we require that all recordable injuries, illnesses and incidents involving our employees be reported and investigated to determine their cause. We also require actions to be taken to prevent recurrence. For consistency across the company, and to enable us to compare our performance with that of other multinational companies, we use the U.S.-based **Occupational Safety and Health Administration (OSHA)** injury and illness record-keeping criteria. We consolidate our injury and illness data into a central system to analyze trends and determine appropriate responses. We also take steps—through internal safety alerts and bulletins—to communicate significant incidents, near-miss events, and conditions that could represent risks to other Merck operations and sites.

Most of our recordable employee injuries are related to motor vehicle accidents, ergonomics issues, and slips, trips and falls. The activities performed in our research and manufacturing operations also present potential risks associated with the handling and use of chemically, biologically and pharmacologically active materials. Our facility and process designs, process controls, protection systems, and emergency response capabilities are critical components of our overall effort to minimize the frequency and severity of incidents.

Motor Vehicle Safety

Vehicle collisions remain a leading cause of serious injury to Merck employees, so preventing motor vehicle accidents continues to be a key focus of our global employee safety efforts. Our sales employees are especially at risk, as most spend a significant part of any given workday on the road. In 2011, we maintained an emphasis on reducing both the frequency and severity of motor vehicle collisions in our sales and commercial operations organizations. These safety initiatives have received

an ongoing commitment and strong sponsorship from our global executive team. Safety efforts resulted in a lower 2011 accidents-per-million-miles (APMM) rate and fewer employee injuries due to motor vehicle collisions in 2011.

Highlights of our 2011 motor vehicle safety initiatives included:

- Establishing divisional and regional performance targets and objectives for motor vehicle safety, with quarterly progress updates provided to executive leadership
- Implementing the motor vehicle safety element of Merck's EHS management system globally (Animal Health not fully implemented)
- Continuing the global employee safe driving training program begun in 2010, with new training content. In addition to training our drivers, we offered each employee the option of inviting a family member (spouse, domestic partner or child) to also complete each of the training modules offered. The program was expanded in 2011 from 51 to 61 global markets.
- Recognizing that commercial use of two-wheeled vehicles is a high-risk activity, highlighting that risk through our motor vehicle safety management system, and discouraging commercial use of two-wheelers globally. At present, three markets continue to use two-wheel vehicles. For 2012, significant enhancements to two-wheel rider safety program are being deployed.

As the footprint of Merck's commercial operations continues to change dramatically, particularly in emerging markets, new initiatives will continue to be launched to address potential hazards.

Ergonomics

In each of the past four years, ergonomics-related injuries have accounted for more than 25 percent of our total recordable injuries globally. Most of those injuries involved manual material handling and repetitive motion. We are taking steps to reduce the frequency and severity of these injuries by familiarizing employees with ergonomic hazards and basic controls for office, laboratory, manufacturing and sales environments.

Merck uses a comprehensive global program to standardize the evaluation and control of ergonomic risk factors at all of our work locations. This program includes a common methodology to identify and evaluate ergonomic stresses using specific tools. These standard tools allow our locations to identify and implement control measures for ergonomic hazards, and allow sharing of proven control practices. These ergonomic assessment tools, along with the engineering of ergonomic design standards, help improve the consistency and effectiveness of ergonomics programs throughout Merck.

Slips, Trips and Falls

In 2011 Merck developed and implemented a program focused on avoiding slips, trips and falls at our manufacturing, laboratory and office locations. As part of the program, the key causal factors of slip-, trip- and fall-related injuries are identified and procedures are provided to address each of these factors. Guidelines and intervention strategies are provided for slip-resistance and the conditions of floors and walking surfaces under normal and abnormal conditions of use. The program provides guidance on cleaning and housekeeping practices, footwear, control of contamination, and procedures for dealing with adverse weather conditions. The program also includes a comprehensive employee training and awareness campaign consisting of safety talks, posters, safety stories and intranet postings.

Process Safety

Merck's corporate Process Safety Management (PSM) program identifies and addresses risks associated with our pharmaceutical and vaccine production operations. The program has not yet been implemented at our Animal Health facilities.

At the rest of our facilities, this program applies not only to operations subject to process-safety regulations, but also to our pilot plants and manufacturing operations worldwide, including Active Pharmaceutical Ingredient (API) and pharmaceutical and vaccine manufacturing. It establishes requirements to identify, evaluate and control process-safety risks so we can operate safely. Process Safety Management baseline and Process Hazards training were provided for EHS and technical personnel

to communicate process-safety principles, requirements and program expectations.

Early in the product development stage, we begin testing our processes to identify potential process-safety hazards. This effort continues throughout the product life cycle. Process equipment design criteria, such as vessel overpressure protection, are detailed in the Merck Engineering Standards. There is still work to be done to align the manufacturing facilities of the newly acquired sites with Merck process safety related engineering standards.

PSM professionals work with operations and technical personnel using such structured techniques as hazard and operability studies to review our operations. These reviews verify that the facility, equipment, and operating controls and procedures are able to address the particular process hazards.

Industrial Hygiene

Merck has established an industrial hygiene (IH) management system to identify and control risks from chemical, physical and biological hazards in the workplace.

For new processes, we focus on process design to prevent or minimize health risks to employees. For existing processes, we formally evaluate ways to further reduce or eliminate occupational risk using the industrial hygiene hierarchy of controls: elimination, substitution, installation of feasible engineering controls, use of administrative controls, or the proper use of personal protective equipment.

We strive to continuously improve our industrial hygiene program by making sure we have implemented consistent processes in our facilities and providing ongoing training to our global IH team. Having a strong industrial hygiene program is critical to protecting our employees' health and supporting the business as we develop increasingly targeted medicines.

Capital Projects Construction Safety

Merck began its construction safety program in 1990, which includes educating and coaching our capital project construction contractors on the basics, changing the safety culture, and focusing on continuous improvement.

Our global engineering group recently adopted Hearts and Minds™, a culture-based program that promotes safety as a personal value. This program has had a significant positive impact. With our cultural, strategic and tactical approach, we have been able to achieve our goal of zero recordable injuries on 95 percent of our active projects, including 58 projects over $3 million and over 100 projects under $3 million. Out of 166 active projects, injuries occurred on only nine of them.

PERFORMANCE

GLOBAL SAFETY	2009	2010	2011
Workplace Safety*			
Recordable Injury Rate (RIR)	0.92	0.79	0.74
RIR Percentage Change	NA	-14%	-6%
Lost-Time Incident Rate (LTIR)	0.41	0.32	0.3
LTIR Percentage Change	NA	-22%	-6%
Fatalities	2	2	3
Motor Vehicle Safety			
Accidents Per Million Miles (APMM)[1]	10.97	10.4	9.9
Capital Projects Construction Safety[2,3]			
RIR	NA	0.80	0.57
DART4/ LTIR	NA	1.85	0.16
Fatalities	NA	0	0

[1] APMM: Reflects both personal and business use of company-owned or -leased vehicles.
[2] LTIR/RIR: Calculated per OSHA methodology.
[3] Primarily reflects capital projects over $100,000 managed by our global engineering group.
[4] DART: Days Away, Reassignment or Transferred calculated per OSHA 300 methodology.
NA: Data not available

Our safety performance has improved in many areas. Our workplace injury and illness rate and our lost-time injury rate improved by 6 percent between 2010 and 2011.

In 2011, the frequency of motor vehicle accidents per million miles (APMM) in Merck-owned or -leased vehicles declined by 5 percent globally, approximately the same improvement we experienced in 2010 over 2009. Our 2011 accident rate was below our internal target and reflects an overall 10 percent reduction in our APMM rate. Motor vehicle injuries as a percentage of all recordable injuries declined in 2011. The total number of 2011 motor vehicle–related injuries declined by 19 percent compared to 2010.

Regrettably, three Merck employees were fatally injured in transportation-related incidents during the year: One fatality was a motor vehicle–related accident, one was related to the operation of a motorbike, and one was related to an airplane accident.

In 2011,global engineering construction safety logged more than 4.8 million construction hours and more than 35,150 safety observations (both corrective and positive) and have registered a reduction in recordable injuries on projects where these metrics were actively tracked. Merck uses the DART (Days Away, Restricted and Transferred) rate for assessing our construction capital projects instead of lost-time incident rate (LTIR), because DART includes restricted and transferred cases that are not included in LTIR. By utilizing DART, we can set more aggressive targets.

Our 2011 construction safety recordable injury rate (RIR) of 0.57 and our DART rate of 0.16 are significantly better than typical rates for private industry construction, and surpassed our targets of RIR=0.87 and DART=0.20. They represent an exceptional reduction from the prior year and make 2011 the safest construction year in the history of our global engineering group.

COMMITMENTS

- Achieve zero fatalities—our overarching safety goal
- Reduce companywide recordable and lost-time injury rates by 15 percent (2012 vs. 2011)
- Reduce the motor vehicle accident rate (percentage of vehicles involved in accidents) in our human health division by 7.5 percent (2012 vs. 2011)

MERCK
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DIVERSITY & INCLUSION

By focusing on people first, Merck has been and always will be inextricably linked to diversity.

We believe in the three pillars of global diversity and inclusion—workforce, workplace and marketplace. Merck's vision is to be the number one trusted and valued healthcare partner to the diverse patients of the world. That's why our strategy leverages a consistent, focused, enterprise-wide approach embracing global diversity and inclusion best practices that results in productivity and innovation.

We define diversity as a rich blend of organizational and human characteristics, needs, experiences and traditions. We define inclusion as providing a sense of belonging to all members of the organization so that they feel welcomed, respected and valued, and can contribute to the best of their abilities.

We believe that our human and organizational differences, when managed successfully, will make us a more innovative, agile and profitable company—able to quickly respond to the emerging global marketplace with critical business insights that reflect the needs of our diverse patients and customers.

Commitment from the Top

The single most significant driver of diversity and inclusion at Merck resides at the very top—with Merck Chairman and CEO Kenneth C. Frazier, who continues the company's legacy and commitment to global diversity and inclusion, and views them as critical to our business success.

In 2011, Ken Frazier joined top executives of global companies in signing the CEO statement of support for the Women's Empowerment Principles—Equality Means Business. The **Women's Empowerment Principles** are a set of principles that provide a road map for business to empower women in the workplace, marketplace and community. The Principles are the result of a collaboration between the United Nations Development Fund for Women (UNIFEM, part of UN Women) and the United Nations Global Compact.

The Principles emphasize that empowering women to participate fully in economic life across all sectors and throughout all levels of economic activity is essential in order to build strong economies; establish more stable and just societies; achieve internationally agreed goals for development, sustainability and human rights; improve quality of life for women, men, families and communities; and propel businesses' operations and achieve their goals. The development of the Principles included an international multi-stakeholder consultation process, which was launched in March 2009.

In January 2012, Ken Frazier took part in a panel discussion called "Leading with Diversity in a Global Economy," the first event in a three-year initiative called JFK50: Justice for All. Sponsored by the JFK Library Foundation and Bingham McCutchen, a global law firm, the program commemorates the 50th anniversary of the John F. Kennedy presidency and examines the core ideals that propelled the U.S. civil rights movement of the 1960s that continue to be important today. The panel discussion also examined why diversity is a key to increased productivity and competitiveness, and how strategies for developing and retaining a workforce must reflect the global marketplace.

Global, Diverse Workforce

Through our diversity and inclusion strategy we make sure that candidate pools are broad and diverse and that all applicants are treated fairly and equally. With a policy to promote equal opportunity globally, our management is responsible for enforcing it by making thoughtful and equitable efforts to correct potential imbalances in our global workforce.

We expect all Merck leaders to achieve key diversity and inclusion goals, and we use those goals to judge not only an individual manager's performance but also division and corporate performance. To this end, we have developed specific tools

for defining, measuring and rewarding diversity performance, including affirmative action plans developed in accordance with legal requirements and diversity objectives.

Inclusive Workplace & Leadership Behaviors

By actively leveraging best practices, we work to create an inclusive work environment that enhances our employees' commitment to the company, increases employee engagement and productivity, and helps to make us more competitive.

With this in mind, the company uses a comprehensive approach to make sure employees have personal and career development opportunities, build important stakeholder relationships throughout their career, learn new skills, and hear the perspectives of the senior-most people in the company to broaden their insights and knowledge.

We also maintain a strong emphasis on mentoring—both informal and formal—as a key to successful leadership development. And we offer work-life integration programs throughout the organization to reflect the needs of today's talent and employee pool, to drive engagement and to enhance our reputation as an employer of choice.

Global Marketplace

Merck recognizes that our customers are becoming increasingly diverse worldwide. Within the United States, for example, more than half of the population will be diverse by 2042, according to projections. Currently, 85 percent of the global population and patients are diverse; 52 percent reside in Africa, Brazil, India and China; 10 percent live with a disability and 7–10 percent are lesbian, gay, bisexual or transgendered. (Source: UN Department of Economic and Social Affairs.)

Given these global trends, and our goal of achieving leadership among the diverse customers of the world, we must be sure that Merck aligns its internal workforce and executive population to better reflect and understand the customers we serve.

Governance

The Office of Global Diversity and Inclusion oversees the company's integrated effort to include diversity in all business practices. This office is led by the Chief Global Diversity & Inclusion Officer, who supports division management in creating tailored diversity initiatives that fit business needs. The office consults with our Office of Ethics and Human Resources to resolve workplace issues involving diversity, and it oversees compliance with local, state, federal and global regulations.

In 1983, Merck received its first Office of Federal Contract Compliance Programs (OFCCP) Exemplary Voluntary Efforts Award, which honors federal contractors that have demonstrated exemplary and innovative efforts to increase the employment opportunities of underrepresented ethnic groups, women, individuals with disabilities, and veterans. Since then, Merck continues to achieve compliance with the OFCCP guidelines under our functionally aligned affirmative action plans.

One Merck Diversity & Inclusion Awards

Merck clearly recognizes that our success is dependent upon the harmonious collaboration of our employees against clearly stated business goals. That's one reason why the company sponsors the Chairman's Global One Merck Diversity and Inclusion Awards in recognition of the outstanding commitment of employees to achieving diversity excellence.

The objective of the Diversity and Inclusion Awards is to recognize employees at all levels from around the world who demonstrate an extraordinary commitment to integrate diversity and inclusion throughout our company at both the individual and team level. In 2010, 39 finalists from Merck's global locations competed for honors in five categories. They were evaluated by a global judges' panel, which included 23 employees from every region, division and band level in the company. The five categories of Global Diversity and Inclusion excellence were:

- Integrates and Collaborates
- Enhances Merck's External Image
- Demonstrates Personal Leadership
- Enhances Merck's Image through External Outreach
- Supports Merck's Business through Inclusion

Philanthropy

Merck values its relationship with organizations that reinforce the company's mission, values, and commitment to global diversity and inclusion. We have maintained a relationship with these organizations because we understand that supporting them helps to build stronger and more robust relationships in the community. Our strategic alliances include:

- NCNW
- The Ph.D. Project
- The Society of Women Engineers
- Healthcare Businesswomen's Association
- Catalyst
- Gay, Lesbian and Straight Education Network
- UNCF
- Hispanic Scholarship Program

Employees with Disabilities

Merck understands that it makes good business sense to provide reasonable work accommodations that enable employees with disabilities to perform the necessary functions of their jobs. To support those employees with visible and non-apparent disabilities—and to make sure disabilities do not become barriers to employment at Merck—we utilize some of the following approaches:

- If special accommodations for the employee are needed, the Merck team works in partnership with the employee, the employee's business unit, the Human Resources team, and the employee's healthcare provider to evaluate reasonable accommodation options. Structural considerations may include special accommodations for ergonomic furniture, travel and hotel, and widened office area access, and reasonable accommodations will be provided on a timely basis.
- Merck provides state-of-the-art adaptive technologies, such as voice recognition software and Braille readers and printers, to help employees with disabilities
- A Merck Human Resources team works with each newly hired employee to identify needs and develop a customized action plan that will be in place before the employee's first day of work. The plan is updated throughout the employee's career with Merck.

PERFORMANCE & COMMITMENTS

DIVERSITY & INCLUSION SUMMARY

Women in the workforce (U.S.)	51%
Women on the Board	17%
Women in executive roles[1] (U.S.)	35%
Women on the senior management team (U.S.)	42%
Women in management roles (U.S.)	43%
Underrepresented members of ethnic groups on the Board	11%
Underrepresented members of ethnic groups in executive roles[1] (U.S.)	17%
Underrepresented members of ethnic groups on the senior management team (U.S.)	15%
Underrepresented members of ethnic groups in the workforce (U.S.)	29%
Underrepresented members of ethnic groups in management roles (U.S.)	19%
New hires that were female	50%
New hires that were members of underrepresented ethnic groups (U.S.)	25%
Applications for diversity awards[2]	NA
Countries represented in applications for diversity awards	NR[2]

[1] Executive is defined as one to two levels below the Chief Executive Officer.
[2] Diversity & Inclusion Awards were not held in 2009 or 2011.
Note: Merck has publicly disclosed EEO-1 information since 1999. Our 2008 data is available **here**.
NA: Data not available

INITIATIVES

Merck has made a sustained and substantive investment to leverage diversity and inclusion as a key growth strategy in recruiting, retention and leadership development programs.

Business Insight Roundtable

Merck has had a substantial and sustained commitment to global diversity and inclusion as a strategic enabler of our vision to improve health outcomes for patients globally. By leveraging all employees' imagination and creativity, the company is unleashing a unique source of competitive advantage: its people.

Early in 2012, the company announced the launch of the Business Insight Roundtables. The Business Insight Roundtable is a powerful new resource in our commitment to saving and improving lives. In keeping with our focus on the needs of Merck patients, customers and colleagues around the word, this new simplified diversity and inclusion governance structure will provide employees with better insights into our most pressing business priorities and better align our efforts to strategies that will help enhance our ability to outperform in the marketplace.

The Business Insight Roundtable structure fully integrates our current diversity teams (Employee Resource Groups (ERGs) into one forum that Chairman, President and CEO Ken Frazier and Executive Committee members will work with directly.

There are three priority areas for the Business Insight Roundtable:

- Talent and Inclusion—Focus on recruiting, developing, retaining and inspiring the best talent.
- Corporate Responsibility—Focus on Merck for Mothers advocacy and awareness.
- Business Insights—Increase awareness, improve adherence in identified areas.

Under this new structure ***all employees*** globally are able to join the roundtables and have the opportunity to contribute by providing perspective on the challenges facing the company today.

Business Employee Resource Groups

Business Employee Resource Groups (ERGs) are one of the ways that we intentionally drive inclusion best practices for our employees. For employees who share similar affiliation, the ERGs represent excellent opportunities to support and contribute to the company's business goals and to network, engage in community outreach, host cultural celebrations, participate in leadership development opportunities, and provide business insights to Merck leaders.

The employee members, representing all levels of the company, volunteer to serve as an educational and cultural resource for other Merck employees and business groups, and to serve as contact points for Merck's external community. ERG membership and participation in ERG-hosted events are open to any full- or part-time employee.

EACH EMPLOYEE RESOURCE GROUP (ERG) IS NOW ALIGNED WITH A BUSINESS INSIGHT ROUNDTABLE:

The Women's Roundtable is aligned with the Merck Women's Network (MWN); the African Ancestry Roundtable is aligned with the League of Employees of African Descent (LEAD); the Hispanic/Latino Roundtable is aligned with the Merck Hispanos Organization (MHO); the Veteran Roundtable is aligned with the Veterans Leadership Network (VLN); the LGBT Roundtable is aligned with the Merck Rainbow Alliance (MRA); the Asia Pacific Roundtable is aligned with the Asia Pacific Association (APA); the Differently Able Roundtable is aligned with the Merck Allies for Disabilities (MAD); the Interfaith Roundtable is aligned with the Merck Interfaith Organization (MIO) and the Native American/Indigenous Roundtable is aligned with Diversity & Work Environment.

As part of an ongoing dialogue, the Merck Manufacturing Leadership Team (MLT) and Employee Resource Groups have been sharing observations, concerns and ideas on how to improve engagement and inclusion across a diverse Merck Manufacturing Division (MMD community. In February 2012, MLT members met with leaders of select members of the ERGs to get a better understanding of what is going on from the ERG perspective and where there are challenges and opportunities. As a result of the discussions, MLT committed to several actions that they will be accountable for in 2012 to address specific challenges. In addition, MLT will continue to meet at least twice a year with the ERG groups to ensure follow-up and feedback on these action plans and the impact they are having on their respective constituency groups.

Recruiting

We have established several recruiting initiatives designed to seek and attract diverse job candidates:

United Negro College Fund: Despite statistics suggesting that more than 50 percent of new entrants into tomorrow's workforce will be minorities, African Americans currently hold less than 3 percent of PhDs in biology and chemistry. To help address this imbalance, Merck joined with the United Negro College Fund (UNCF) to help expand the pool of world-class African-American biomedical scientists and, in so doing, achieve the complementary goals of enhancing economic competitiveness and social diversity in the United States.

The UNCF/Merck Science Initiative (UMSI), was launched in 1995 with a ten-year, $20 million grant from the Merck Company Foundation. In 2005, the Foundation renewed its commitment to UNCF with a five-year, $13 million grant, and in 2011, the Foundation pledged another $14 million to UNCF over five years. The company has also provided $3 million to support the summer intern stipends of the undergraduate Fellows since 1995.

National Alliance for Hispanic Health: In 2008, working with the National Alliance for Hispanic Health, we launched a program to promote science education, the Alliance/Merck Ciencia (Science) Hispanic Scholars Program. The program is designed to help Hispanic students achieve access in the pursuit of undergraduate degrees in science, technology, engineering and mathematics (STEM) related fields.

Veterans and People with Disabilities: In 2010, Merck formed a new recruiting council made up of senior recruiters from each division, along with representatives from the Business Employee Resource Groups, Veterans Leadership Network and Merck Allies for Disabilities, to develop a recruiting strategy to attract and retain talent from these two constituencies. The council formed new partnerships with external recruiting partners such as Service Academy Career Conferences; Equal Opportunity Employers Career Expo for People with Disabilities and Disabled Veterans; Walter Reed Wounded Warriors Career Fair; and Milicruit Virtual Military Career Fairs.

American Association for the Advancement of Sciences and the **National Technical Institute for the Deaf**: Merck has partnered with the American Association for the Advancement of Sciences (AAAS) and the National Institute for the Deaf (NTID) since 2004 to recruit interns with disabilities in science, engineering, mathematics, computer sciences and other select fields of business. Merck also partners with the Emerging Leaders program managed by the National Business and Disability Council to hire interns and entry-level talent.

Career Opportunities for Students with Disabilities: The company collaborates with Career Opportunities for Students with Disabilities (COSD) to learn how to more effectively prepare students with disabilities for recruitment in the industry.

Disability Mentoring Day is another opportunity to promote career development for students and job seekers with disabilities through job shadowing and hands-on career exploration. It provides an opportunity to emphasize connections between school and work, evaluate personal goals, and explore possible career paths.

Diversity Conferences: Merck partners with several diversity-focused professional organizations in order to find diverse talent for entry-level through professional-level positions within the company, targeting African Americans, Hispanics and the LGBT community. We are able to target diverse constituencies through

our relationships with such organizations as the National Black MBA, the National Society of Hispanic MBAs and Reaching Out MBA.

We also partner with several minority engineering conferences like Black Engineer of the Year Award Conference, National Society of Black Engineers, Society of Hispanic Professionals and Society of Women Engineers, in an effort to source qualified engineering talent. Moreover we partner with several minority research science organizations—like the National Organization of Black Chemist and Chemical Engineers, Annual Biomedical Research Conference for Minority Students, and the American Indian Science and Engineering Society—in an effort to increase the diverse talent in our Merck Research Laboratory division.

Training & Leadership Development

Merck offers employees a variety of training programs and development opportunities that reinforce our commitment to diversity and inclusion. Courses such as "Microinequities, Managing Across Cultures" give employees an opportunity to learn about and address non-inclusive behaviors and different cultures. To date, more than 22,000 employees have taken the Microinequities course.

Employees can also take advantage of external opportunities such as Merck-sponsored leadership conferences and workshops, and they have access to an open mentoring tool that matches mentors and mentees and provides guidance to support mentoring.

In 2011, Merck launched the Women's Leadership Development Program, which is now part of our standard curriculum. The Program is designed to accelerate the development and readiness for more senior level roles of director-level talent. A global initiative that Merck launched at Simmons College in Boston, Massachusetts, the program focuses on skills development, knowledge sharing and individual coaching to help position women as future Merck leaders.

- The specific objectives of the program are to:
- Develop a talent pool to increase leadership diversity and improve business results
- Reflect the diverse nature of our customer base
- Increase retention of high-potential women leaders
- Have Merck be viewed as an employer of choice for senior women
- Create more opportunities for women's career advancement

Women's Mentoring Program

The Women's Mentoring Program, which was launched in 2011 in the Global Human Health Europe/Canada regions, is designed to accelerate the development of talent for future senior roles, increase retention and engagement of talent, increase the strength of the leadership pipeline and increase exposure of key talent to leadership. The program is built on a mentor-mentee relationship that is sustained through regular and frequent communications and meetings.

Women's Leadership Summit

More than 200 female leaders met in Munich in 2011 for the second annual Merck/MSD Women's Leadership Summit. The meeting was an opportunity for women to network, learn from each other and develop new strategies and skills to be effective and successful leaders at Merck/MSD.

RESTRUCTURING

In July 2011, in the midst of a challenging business environment, the company announced the latest phase of its global restructuring program (the "Merger Restructuring Program") that was initiated in conjunction with the integration of the legacy Merck and legacy Schering-Plough businesses.

This Merger Restructuring Program was intended to support Merck's strategic direction as a customer-focused, innovative and diversified global healthcare company, and enable the company to invest in key areas for future growth, including emerging markets, biologics, vaccines and consumer care.

As part of this latest phase, the company expected to reduce its workforce measured at the time of the Merger by an additional 12 percent to 13 percent across the company worldwide. A majority of the workforce reductions in this phase of the Merger Restructuring Program related to manufacturing (including Animal Health), administrative and headquarters organizations.

Previously announced workforce reductions of approximately 17 percent in earlier phases of the program primarily reflected the elimination of positions in sales, administrative and headquarters organizations, as well as from the sale or closure of certain manufacturing and research and development sites and the consolidation of office facilities.

The company will continue to hire employees in strategic growth areas of the business as necessary and will continue to pursue productivity and operational efficiencies and regularly evaluate its manufacturing supply chain capabilities.

While we believe these actions are necessary to support Merck's competitive advantage, they are difficult decisions that will impact some of our colleagues, their families and local communities. We are committed to making these decisions in a responsible way, with respect, transparency and open, ongoing communication. Eligible employees affected by restructuring actions will receive benefits and other services, including severance pay, continuance of health care benefits and outplacement services.

For updated information on Merck's restructuring program, please see our most recently filed **quarterly and annual reports**.

COMPLIANCE

Being an ethical company is about much more than simply adhering to the letter of the law—but that's an important step.

As part of our long-standing commitment to ethics and good corporate citizenship, our first step is always to comply with the laws and regulations that govern the way we market and sell our medicines, vaccines and other products. We have a well-established compliance program that:

- Follows the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) Code of Practice requirements, as well as other applicable regional or country industry codes of conduct including those issued by the Pharmaceutical Research and Manufacturers of America (PhRMA) and European Federation of Pharmaceutical Industry Associations (EFPIA)
- Seeks to prevent, detect and resolve potential violations of law or company policy
- Regularly assesses and adjusts our evolving business and compliance risks

Merck's Board of Directors and senior management, including the company's chief ethics and compliance officer and Corporate Compliance Committee, oversee the company's global compliance program, including compliance-related policies and procedures, education and training—all of which reflect the highest standards and are tailored to Merck's business and culture.

OFFICE OF ETHICS

In our business, adherence to the rule of law, ethical working practices, good corporate governance, transparency and respect for people are critically important to patients, healthcare professionals, our employees, our investors and the purchasers of our products—and to our sustainable business success.

We have strong corporate policies and safeguards in place, and a long history of abiding by, and promoting, high ethical standards and the law. Every Merck employee is responsible for adhering to business practices that are in accordance with the letter and spirit of the law and with ethical principles that reflect the highest standards of corporate and individual behavior.

Inappropriate behavior can never be rationalized as being in the company's interest. No act of impropriety advances the interest of the company; no act of impropriety will be tolerated.

The Merck Office of Ethics was established in 1995. In 2009, the Office of Ethics became part of the Global Compliance Organization, which was formally established following the merger between Merck and Schering-Plough.

The Office of Ethics is led by the vice president, Ethics, Privacy and Policy, who reports to the company's chief ethics and compliance officer. There are seven ethics officers who handle ethics concerns and ombuds matters. The Office of Ethics also has an ethics professional who supports training, communication and reporting., In addition there are four administrative professionals who support the Office of Ethics staff. The 2011 budget for the Office of Ethics was $2,341,068.

Resources for Employees

The Office of Ethics serves as an additional employee resource for raising concerns about ethical issues. Employees can do so in several ways. One is to contact (via toll-free telephone or intranet) the AdviceLine, which is run by an outside vendor.

Or employees can contact the Office of Ethics directly, to speak to an ethics officer or an ombudsman.

The Merck Ombuds Program offers a safe haven for U.S.-based employees to discuss work-related issues without fear of retaliation. This program confidentially addresses employees' concerns about conduct that may be inconsistent with Merck's policies, practices, values and standards. Outside the U.S., employees may also contact the Office of Ethics directly or use the AdviceLine to raise concerns.

About 40 percent of the calls that the Office of Ethics receives each year are classified as part of the ombuds process and, as such, are kept confidential.

Addressing Misconduct

In 2010, the Global Compliance Organization launched a Sigma project to harmonize the process of managing and tracking investigations. During 2011, the rollout of the global investigations process referred to as Compliance Issue Visibility and Response (CIVR) was largely completed. The implementation of that global process has already increased management's visibility and awareness of ethics and compliance concerns. This increase is shown in the Performance & Commitments tab above.

When Merck substantiates allegations of ethical misconduct, it imposes any of a variety of disciplinary actions on those responsible, such as dismissal from the company, issuance of final written warning letters, or financial penalties. We also take appropriate steps to address any needed improvements in organizational and process controls.

PERFORMANCE & COMMITMENTS

ETHICAL BUSINESS PRACTICES	2009	2010	2011
Employees trained in the Code of Conduct[1]	NA	71%	90%
Employees responded to disclosure statement on conflicts of interest form	NA	100%	98%
Calls to the Merck AdviceLine[2]	392	266	NA
Concerns brought to the company's attention, such as employees seeking ombudsman services (most often relating to manager and employee relations) and guidance on conflict of interest or Code of Conduct issues[3,4]	652	725	873
Allegations involving noncompliance with company policy investigated[5]	NA	NA	1080
Substantiated allegations to concerns/issues raised[4]	NA	11%	65%

[1] As a result of the merger, 2010 data does not fully reflect a harmonized training process for the combined company. By the end of 2013, we will have the ability to report on global training.

[2] 2009 data includes calls to the Schering-Plough Integrity Action Line. 2010 data does not reflect worldwide ethics and compliance concerns as described in the Addressing Misconduct paragraphs of the Office of Ethics section. However, we no longer track this metric. Relevant information is now being measured by other data points as part of the Merck/Schering-Plough harmonization process.

[3] 2009 data includes calls to the Schering-Plough Compliance Office.

[4] 2010 data does not reflect worldwide ethics and compliance concerns as described in the Addressing Misconduct paragraphs of the Office of Ethics section. Only since 2011 have we had the ability to report on this data on a global basis.

[5] This data represents investigations conducted on a companywide basis.

NA: Not available

MERCK CODE OF CONDUCT

Beyond providing a forum for employees to raise concerns, the Office of Ethics functions as the center of expertise for the Values and Standards Program.

Ethics and integrity make up one of our five core values, as outlined in our **mission statement**. These values are underscored in the company's code of business conduct, ***Our Values and Standards***, which was first developed and distributed to Merck employees in 1999, and updated in 2002 and 2005. Edition III of the Code of Conduct was published in June 2011.

Our Code of Conduct, available in 26 languages, applies one standard of conduct to all employees worldwide, with ethical business practices serving as a key measure in all annual performance evaluations.

Merck's Code of Conduct has been designed to deter wrongdoing and foster:

- Honest and ethical conduct, including the ethical handling of actual or potential conflicts of interest between personal and professional relationships
- The protection of our confidential and proprietary information and that of our customers and vendors
- Compliance with company policies and applicable governmental laws, rules and regulatory requirements
- Prompt internal reporting of violations of the code
- Accountability for adherence to the values and standards set forth in the code

To download a copy of the Merck Code of Conduct, *Our Values and Standards*, edition III, or locate company resources to raise a question or concern, **click here**.

Ethics Training & Development

While our standards for conduct do not vary, and apply equally to every Merck facility in every country, we understand that employees face varying situations in different parts of the world. We recognize that in some cases we are asking people to act in ways that are contrary to prevailing cultural practices. To accommodate cultural differences and assist our employees in managing real-world challenges, we adapt our training to different countries or regions.

To assist in this effort, the Global Compliance Organization developed a training system that includes clear procedures and documentation for training analysis, design, development, implementation and evaluation metrics; appropriate governance; and a supporting systems infrastructure.

In 2012, the office developed a new Code of Conduct e-Learning course. The purpose of this training is to provide practical guidance on the Code of Conduct emphasizing the importance of raising concerns. All employees worldwide will be required to complete this new training before the end of the year. As a key measure in annual employee performance reviews, ethics play an integral role in our decisions about employee advancement in the company.

The Merck Office of Ethics also supports a "train the trainers" program for the Code of Conduct, through which it certifies certain employees for assisting the office in communicating with other employees about the company's commitment to ethical, legal and responsible business practices.

Conflicts of Interest

In accordance with Merck's Conflict of Interest Policy, all directors, officers and employees are expected to regulate their outside activities to avoid any conflict of interest.

An important component of Merck's corporate compliance program is its annual compliance review, which includes training, an annual conflict of interest certification and disclosure process, and compliance with key corporate policies. Under the Conflict of Interest Policy, all directors, officers, managers and other selected company employees must certify, in writing, the absence or existence of actual or potential conflicts of interest.

The process also requires employees to certify compliance with corporate policies on ethical business practices, which prohibit illegal or unethical payments or conduct; requires antitrust law compliance; and forbids insider trading. Moreover, all U.S.-based employees must certify compliance with Merck's corporate policy on the effects of exclusions, debarments, suspensions and healthcare-related criminal convictions, reporting and screening.

The 2011 certification process included a new question soliciting employees to report any concern they may have about the company's business *not* being conducted in full compliance with laws and regulations and company policies. Although the number of responses submitted represented less than 1 percent of all employees, the company investigated each issue to ensure full compliance with laws, regulations and company policy.

External Suppliers' Ethical Standards

We abide by strict ethical standards in our own operations—and we insist on equivalent standards from our suppliers. In November 2011, the company approved the Merck Business Partner Code of Conduct. The Merck Business Partner Code of Conduct is based on Merck's Code of Conduct, *Our Values and Standards*, as well as the Pharmaceutical Supply Chain Initiative's (PSCI's) Pharmaceutical Industry Principles and the 10 principles of the United Nations Global Compact.

For more information on how we work with our suppliers to uphold ethical standards, please **click here**.

GLOBAL PRIVACY PROGRAM

Merck has implemented a comprehensive global privacy program that promotes accountable privacy and data-protection practices across our business and with our collaborative partners and suppliers.

Our program is designed to assure that four core privacy values are embedded into the way we conduct our business, without regard to how our business, technology, or other external factors may change.

Our global privacy program is structured around a system of five core elements consistent with recognized standards for implementing an accountable privacy program. While the principle of accountability was first recognized in the Organisation for Economic Co-operation and Development (OECD) 1980 *Guidelines Governing the Protection of Privacy and Transborder Flows of Personal Data*, the essential elements for an accountable privacy program were first expressed in 2009 by the Accountability Project, an initiative led by the Centre for Information Policy Leadership, with participation from privacy regulators, data protection authorities, business and academia. Merck established its system in 2010 and joined the Accountability Project in 2011.

Our system is modeled for continuous improvement based on changes within our business and in the external environment that affect inherent privacy risks and the effectiveness of our privacy controls. The five core elements are implemented in sequence:

Awareness

- Promote and maintain a corporate culture that respects privacy and protects information about people
- Communicate timely information about updates to privacy laws, regulations, rules, guidelines and policy issues

Policies & Standards

- Implement privacy and data-protection policies and standards that set forth operational principles and procedures, governance, accountability, incident handling and individual redress

MERCK PRIVACY VALUES

respect	trust	prevention	compliance
We recognize that privacy concerns often relate to the essence of who we are and how we view the world, so our privacy program is rooted in the ethics of **respect** for people.	We strive to build and preserve the **trust** of our customers, employees, patients and other stakeholders in how we respect privacy and protect information about people.	We seek to **prevent** physical, financial, reputational and other types of privacy **harm** to individuals.	We aim to **comply** with both the letter and spirit of privacy and data protection laws that apply to our business and to how we process and transfer data globally.

Training

- Implement a privacy-training curriculum designed to support the core elements of "Awareness" and "Policies & Standards," and to provide functional knowledge aligned to roles and responsibilities

Accountability

Demonstrate the effectiveness of our program by:

- Prospectively building and documenting appropriate privacy and data-protection requirements into Merck processes and systems that will be maintained throughout process and system life cycles
- Periodically verifying privacy and data protection compliance through audits, assessments and investigations
- Reporting to government authorities as required by law
- Management acknowledgement and responsibility for ensuring that requirements are addressed

Metrics

- Define baseline and target metrics to determine the effectiveness, maturity and risks associated with the privacy program
- Collect and analyze data for each metric and evaluate program effectiveness, maturity and risks, and areas for enhancement, improvement and risk mitigation

Consistent with our privacy values, we continue to believe that trust is core to our privacy mission. We define Privacy TRUST in terms of how it supports each of the operational privacy and data-protection principles to which we adhere:

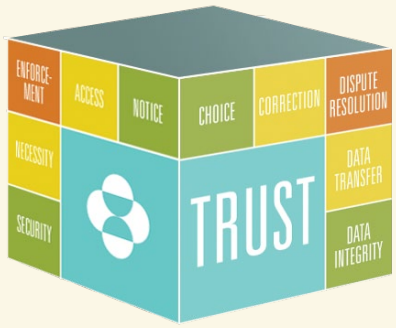
T—Transparency: being clear about how personal information is collected, used and disclosed (supports our privacy principle of Notice)

R—Respecting Choices: such as whether or not people want to participate in our programs (supports our privacy principle of Choice)

U—Understanding Perspectives: being responsive to people who have different levels of concerns about their privacy based on cultural perspectives and personal experiences (supports our privacy principle of Necessity)

S—Security: protecting personal information from loss, misuse, unauthorized access, disclosure, alteration or destruction (supports our privacy principles of Data Integrity, Security and Data Transfer)

T—Treating our stakeholders in a manner consistent with the company's values (supports our privacy principles of Access, Correction, Enforcement and Dispute Resolution)



Global Cross-Border Data Flows

As a U.S.-based corporation, we have relied on the Safe Harbor Framework for transfers of personal data from the European Economic Area ("EEA") to the United States (the "Safe Harbor") as a primary mechanism for facilitating cross-border data flow originating from European countries. We also have utilized the Safe Harbor principles to support the development of our comprehensive privacy program, including incorporation of Safe Harbor standards for movement of personal data to and from other countries.

Merck was one of the first pharmaceutical companies to certify its adherence to the Safe Harbor Framework. We first certified in November 2001. U.S. organizations that certify to the U.S.-EU Safe Harbor are recognized as providing adequate protection for personal data transferred from the EEA, and organizations that certify to the U.S.-Swiss Safe Harbor are recognized as providing adequate protection for personal data transferred from Switzerland. Our Safe Harbor certification applies to transfers of personal information about a broad range of stakeholders from the EEA and, since 2009, from Switzerland, including employees, customers, patients, clinical investigators, healthcare professionals and others. We have reaffirmed our adherence to the Safe Harbor annually since 2001.

Privacy Risk & Effectiveness

Consistent with our commitments to accountability and continuous improvement of our system, in 2011 we developed a quantitative approach to consistently evaluate privacy risk and determine the impact of control effectiveness on privacy risks across our operations. In 3Q 2011, we began applying this approach to new programs and initiatives to provide consistent guidance on required privacy standards and controls. We also evaluated all existing processes and country operations, and we utilized this approach to determined opportunities for improvement in specific areas and across our program.

Transparency & Privacy

We aspire to be a leader in privacy transparency practices. We aim to achieve this by explaining our privacy practices in ways that enable our stakeholders to make meaningful choices about how we collect, use and disclose personal information about them.

Since 2007, we have developed and published standardized comprehensive privacy notices for major categories of stakeholders about whom we collect, use and disclose personal information across our business. We adopted a format first proposed in 2007 for the U.S. financial services industry.[1] This standard format uses a tabular approach to categorize the information provided in the notices in order to make them easier to understand and easier for people who interact with us in multiple ways to compare our practices. All our standardized comprehensive notices, available in multiple languages, are published **online**.

We recognize that health innovations continue at a rapid pace, and we strive to enhance our transparency practices to address these changes. In 2009, we updated our **Internet Privacy Policy** to include explanations of new ways in which we planned to collect personal information online using social media and mobile computing; the transparency standards we apply to these types of online technologies; and additional disclosures regarding collection of information from personal computers and other electronic devices. We also began implementing contextual privacy notices in our apps for mobile devices in 2009. Most of our privacy notices can be found in the description at the app store, as well as in the information, settings, email and reporting features of our mobile apps. In 2011, we began implementing reference notices to Merck privacy practices on social media platforms through which Merck engages stakeholders such as Facebook and Twitter.

Advocacy

Merck is actively engaged in policy and advocacy efforts to further privacy standards and next-generation policy frameworks that promote responsible collection, use and collaborative sharing of data in support of healthcare, biomedical research and other innovation. Merck is a member of the **International Pharmaceutical Privacy Consortium (IPPC)**, an association of research-based pharmaceutical companies that supports worldwide responsibility for the protection of personal health

information and other types of personal data. Merck also participates in other privacy organizations, such as the **Centre for Information Policy Leadership (CIPL)**, the **Future of Privacy Forum**, and the **United States Council for International Business (USCIB)**, which encourage responsible information governance and development of leading privacy practices. We also participate as a formal stakeholder in the **Center for Law, Ethics and Applied Research in Health information (CLEAR Health Information)**.

In 2011, we engaged in constructive discussions with U.S. and European regulators, academics and business privacy leaders on Phase III of the CIPL Accountability Project, including presentation of our approach to privacy-compliance verification. The outcome of Phase III was published in a whitepaper, *Implementing Accountability in the Marketplace*, published and released by CIPL in Mexico City on November 1 in connection with the 33rd International Conference of Privacy and Data Protection Commissioners. In 2011, Merck cosponsored a consumer survey to evaluate consumer trust and value in health IT. The survey was commissioned by the National Partnership for Women & Families and was conducted in August 2011. A report on the survey findings, ***Making IT Meaningful: How Consumers Value and Trust Health IT***, was published in February 2012.

[1] The proposed Model Privacy Notice was included in the Interagency Proposal for Model Privacy Form under the Gramm-Leach-Bliley Act, 72 FR 14940 (March 29, 2007).

PERFORMANCE & COMMITMENTS

PRIVACY DATA	2009	2010	2011
Total number of countries in which we conducted privacy compliance verification and risk assessment	NR	87	137
Percent change in program control effectiveness (using 2010 as a baseline)	—	—	+32%
Total number of substantiated concerns regarding privacy practices, breaches of privacy and losses of personal data[1]	NR	92	229
Percent of reported concerns regarding privacy practices, breaches of privacy and losses of personal data that were substantiated	NR	78%	68%
Total number of privacy breaches requiring notification by Merck to individuals or government authorities	NR	0	2
Total number of privacy breaches requiring notification by third parties working for Merck to individuals or government authorities	NR	2	3

[1] Privacy concerns include all concerns escalated to the Merck Privacy Office about the company's privacy practices.
NR: Not reported. These indicators were new for Merck in 2010 and, for this reason, prior year data points are not reported.

SUPPLY CHAIN

Merck manufactures medicines and vaccines that are sold in more than 150 countries.

Merck is committed to providing the global community with quality products and a reliable supply of safe and effective medicines and vaccines. We take our responsibility to public health and patient safety very seriously and are taking significant steps to increase access to our products in the critical, fast-developing emerging markets. This is why we maintain strict product quality standards and multiple supply chain safeguards to ensure the safety and supply of our products—no matter where our medicines and vaccines are manufactured.

We verify incoming materials, and manufacture, store, handle and distribute our products according to current Good Manufacturing Practices (cGMP) as well as other regulatory requirements (e.g., those of the European Medicines Agency and U.S. Food and Drug Administration), as applicable. Our product quality and safety processes and procedures are broad in scope and include stringent standards, compliance education and training, and strict supplier-selection criteria, as well as periodic audits and inspections.

We also support industry and regulatory efforts to develop and optimize quality and manufacturing standards worldwide, including alignment with those of the International Conference on Harmonization (ICH). These commitments are unequivocal as Merck drives toward becoming a global healthcare leader.

PERFORMANCE & COMMITMENTS

MANUFACTURING AND SUPPLY	2009	2010	2011
Number of product recalls in the United States[1]	NA	7	0

[1] In 2010, Merck initiated a total of seven product recalls in the United States. These were voluntary actions undertaken by the company as part of our commitment to ensuring product quality. These recalls specifically included: (1) three prescription product and one over-the-counter product Class II recalls, and (2) one prescription product and two over-the-counter product Class III recalls. The recall classifications were determined in agreement with the FDA and are further defined on www.fda.gov.

NA: Data not available

QUALITY & SAFETY STANDARDS

Product quality excellence is an unequivocal Merck standard.

We apply and adhere to a strict set of quality standards, and we have policies and procedures in place to identify, measure, control and sustain product quality excellence. We continuously strive to improve these standards in order to enhance procedures and ensure ongoing compliance with current Good Manufacturing Practices (cGMP).

All manufacturing facilities that Merck owns and operates, and any company from which we purchase formulated pharmaceuticals, active ingredients and sterile products, must comply with cGMP standards. These standards include requirements for verifying the sources of incoming materials, manufacturing, storage, handling and distribution of products.

Counterfeit products are a growing global problem and a serious threat to public health. We at Merck believe that maintaining the integrity of our supply chain is of paramount importance. Merck's corporate global anti-counterfeiting program has three primary goals: securing the supply chain; deterring, rapidly detecting and responding to counterfeit activity; and raising public awareness about the risks posed by counterfeits. Learn more about Merck's **anti-counterfeit program**.

Supplier Selection

We conduct due diligence and precontract audits of every potential new supplier of active pharmaceutical ingredients or formulated products and sterile products to determine its acceptability and compliance with cGMP. Merck reviews the systems that the potential supplier uses to purchase materials in order to ensure the quality of the products the supplier hopes to provide to Merck. Only if the supplier meets Merck's stringent criteria, which include a review of the company's regulatory inspection and outcome history, will we then negotiate a commercial agreement. These agreements include detailed provisions relating to the quality standards we require suppliers to uphold, in order to manufacture a product for our use.

Audits and Inspections

We conduct periodic audits to further ensure that the supplier continues to meet cGMP. Through such audits, we evaluate the continued acceptability of the facility from a quality assurance and regulatory compliance perspective.

The frequency of quality auditing depends on a number of factors, including:

- The nature of the product produced (e.g., whether it is a formulated pharmaceutical, active ingredient or sterile product) and how it is used by Merck
- Whether the formulated pharmaceutical, active ingredient or sterile product is produced using dedicated equipment and/or in a dedicated facility
- The technical complexity of the manufacturing process and operations (i.e., manufacturing difficulty) involved in producing the formulated pharmaceutical, active ingredient or sterile product

Quality tests are performed on all active pharmaceutical ingredients that Merck purchases as part of our overall supplier qualification process, and further tests are performed during subsequent stages of manufacturing. Quality tests are performed on all formulated products before we release them to the marketplace.

Testing of chemicals used in the manufacturing of our drug products is conducted in accordance with our specifications, which in many cases include the applicable Pharmacopeia standards (i.e., the United States Pharmacopeia (USP), the European Pharmacopeia (EUP), and the Japanese Pharmacopeia). The USP is the official standard for all prescription and over-the-counter medicines, dietary supplements, and other healthcare products manufactured and sold in the United States. The standards are recognized and used in more than 130 countries.

Education and Training

We provide appropriate and ongoing training on quality and cGMP for our employees, to ensure they are prepared to perform their duties effectively. These systems not only ensure that all applicable employees are trained, but they also monitor the effectiveness of training.

PRODUCT SUPPLY

Vaccine Supply

Merck, like many other companies, has experienced a number of manufacturing challenges that prevented us from being able to meet global demand for a number of our vaccines. As a result, some of our vaccines have been on back order and others have been unavailable for order for some time.

We are working to address those challenges by investing over $1 billion in new manufacturing resources to ensure that we have the long-term supply capabilities to meet public health needs around the world. Specifically, we have modernized some of our processes and equipment at our facility in West Point, Pennsylvania, we are expanding our vaccine manufacturing facilities in Virginia and France, and we are building two new facilities, in North Carolina and Ireland. Our goal is to have additional manufacturing capacity and to create redundancy in our supply chain for certain products, so that we will not experience supply disruptions when temporary issues arise in the manufacture of our vaccines.

Medicines Supply

The company has, in the past, experienced difficulties manufacturing certain of its animal health products and is currently experiencing difficulty manufacturing certain women's health products.

In resolving these problems, our goal is to ensure consistent manufacturing and quality standards at these facilities, to drive sustainable compliance excellence and long-term performance at the sites, and to minimize manufacturing issues in the future.

Our Commitment to Quality

We continue to maintain strict product quality standards and multiple supply chain safeguards to ensure the safety and supply of our products, whether our medicines and vaccines are manufactured internally or externally.

Merck remains committed to the development and commercialization of vaccines and to reestablishing ourselves as a reliable global supplier of quality vaccines and medicines.

ANTI-COUNTERFEITING

Counterfeit pharmaceutical products are a growing global problem and a serious threat to public health.

They can include wrong doses of active ingredient, no active ingredient or, in some cases, harmful or poisonous ingredients.

We define a counterfeit medicine as a product that contains an unauthorized use of trademark, trade name, other identifying mark, imprint, or device, or any likeness thereof, to adulterate or falsely represent that the product was manufactured or distributed by the identified manufacturer or distributor. As counterfeiters have become more sophisticated, counterfeit products have become so similar in appearance to authentic products that, without laboratory testing, it is difficult to tell the authentic from the counterfeit medicines.

For Merck, maintaining patient safety and protecting our reputation are paramount. We maintain a comprehensive worldwide anti-counterfeiting program that has three goals:

1. Secure the supply chains
2. Deter, rapidly detect and respond to counterfeit activity
3. Raise public and stakeholder awareness of the risks posed by counterfeits, and advocate, for increased enforcement and to shape relevant regulatory requirements

Management

To focus our work in this area, our Anti-Counterfeiting Steering Committee oversees our global anti-counterfeiting strategy to ensure that our anti-counterfeiting goals are reached.

The cross-functional team is led by senior leaders from Global Human Health, Merck Manufacturing Division, and Global Security. These areas are responsible for the worldwide marketing and sale of our products, investigating suspected counterfeit events, testing suspected counterfeit products and preparing investigative reports.

Other functional areas involved in our anti-counterfeiting efforts include: Packaging Technology, which incorporates security features into our products; Legal, which works with regulatory and law enforcement authorities to prosecute offenders; and Global Public Policy, which coordinates our advocacy activities to support stronger anti-counterfeiting laws.

Maintaining a Secure Supply Chain

Merck has in place strict policies and procedures designed to keep our drug distribution system safe and secure, and to deter counterfeit products from entering the supply chain.

In the United States, for example, we require customers to purchase our products directly from Merck or Merck-authorized distributors. In addition, we publish the names of authorized distributors on Merck's **website** and we audit a majority of our distributors to ensure compliance with Merck policies and procedures.

Merck also partners with law enforcement agencies to detect and respond to counterfeit products, including U.S. authorities on importing counterfeit pharmaceuticals and EU authorities on importing or trans-shipping counterfeit pharmaceuticals through the European Union. Working with customs authorities, we have helped identify high-risk ports, borders and postal depots and have drafted a framework of action for use by customs authorities to detect and respond to counterfeit activities.

In a number of developing countries, moreover, we have provided training to customs officials, in conjunction with the **Pharmaceutical Security Institute**, on trademarks and industry import and export practices.

In the United States, the greatest identified threat to patients receiving counterfeit medicines is through the distribution of pharmaceutical products via illegitimate online drug sellers. In response to this threat, Merck maintains an proactive internet monitoring program designed to identify threats to our patients

from illegitimate online drug sellers, and mitigation of those threats through civil and criminal enforcement actions.

Merck promptly reports all confirmed counterfeit activities to regulatory and/or law enforcement agencies. We work with regulators and distributors to remove counterfeit products from the market, and with law enforcement officials to trace counterfeit products back to an original source of supply.

We continue to work with industry associations and regulatory agencies to develop a standardized system that will uniquely identify or code products to create a more secure pharmaceutical product supply chain. Through our own pilot programs, we have gained insights into the use of innovative technologies—such as radio-frequency identification (RFID) and two-dimensional (2D) data-matrix bar coding—that we believe are effective ways to secure the supply chain and identify counterfeits. In 2009, we supported the 2D bar code technology pilot project sponsored by the European Federation of Pharmaceutical Industries and Associations (EFPIA).

Forensic Laboratory

A key part of our ability to identify suspected counterfeits is our advanced forensic laboratory that analyzes suspected counterfeit products and, if possible, identifies an origin of counterfeit material. Lab findings are shared with regulatory and/or law enforcement agencies, and may be used to support subsequent enforcement actions and legal proceedings. Merck also has forensic detection devices in the field to analyze and detect counterfeits in different regions around the world.

As counterfeiters improve their skills and techniques, our forensic scientists have pioneered the use of several analytical tools for pharmaceutical-counterfeits detection, and continue to explore new analytical tools that increase their forensic testing capabilities.

Public Awareness

Finally, we support efforts to educate the public about the risks of counterfeit drugs and how to protect against them. We work with **Partnership for Safe Medicines** and supported publication of a revised report on counterfeits issued by the American Council on Science and Health in February 2009 entitled **"Counterfeit Drugs: Coming to a Pharmacy Near You,"** which describes the growing threat of counterfeit medicines to public health.

PERFORMANCE & COMMITMENTS

Performance

SUMMARY	2009	2010	2011
Investigations of suspected counterfeit Merck product	NA	179	166
Substantiated cases of counterfeit Merck product[1]	NA	122	84
[1] For 2011, 44 cases are still pending a conclusion.			
NA: Data not available.			

Commitments

- Execute a corporate, proactive, worldwide anti-counterfeit strategy focused on securing the supply chain, detecting and responding to counterfeit events, and raising awareness of the risks of counterfeit pharmaceutical products
- Take proactive measures to identify, assess and mitigate threats to our patients associated with counterfeit and other fraudulent products
- Take actions to raise public awareness of the risks posed by counterfeits and advocate, for increased enforcement and to shape relevant regulatory requirements
- Train key stakeholders and business partners in the identification of suspicious activities and/or suspected counterfeit products
- Continue to partner with industry groups to provide advocacy on high-priority anti-counterfeiting policy initiatives, and explore new partnership opportunities with patients and other external stakeholders
- Develop metrics to gauge the impact of specific actions to ensure that resources remain focused on the areas that can have greatest benefit
- Continue advocacy efforts to support the development of a standardized system to identify and code medical products

PUBLIC POLICY

Merck supports increased enforcement of existing anti-counterfeiting laws and the adoption of new public policies to strengthen existing laws and enforcement programs, including increased criminal and civil penalties for counterfeiters.

We advocate for such change in a number of ways:

- As a member of the **Alliance for Safe Online Pharmacies**, Merck supports the efforts of the White House's Intellectual Property Enforcement Coordinator to combat online pharmaceutical crime. We support initiatives to raise awareness of the dangers of purchasing from rogue sites and of the options to access legitimate online pharmacies.
- As a member of the Pharmaceutical Distribution Security Alliance (PDSA), Merck supports the passage of U.S. legislation that would create a national system and uniform standards to track product across the pharmaceutical supply chain. PDSA includes over 20 partners in the domestic pharmaceutical distribution supply chain working to achieve a national solution towards product tracking.
- Merck **submitted comments in 2008** to a proposed amendment to the U.S. Food and Drug Act requiring the agency to develop a standardized numerical identifier for prescription drugs by 2010
- Also in 2008, Merck supported the European Commission's Legislative Packaging proposal on anti-counterfeiting, which includes use of mass serialization, product security features and tamper-evident seals
- Merck supports the Anti-Counterfeiting Trade Agreement, which would increase protection against a wide range of intellectual property infringements
- In 1997, Merck and other pharmaceutical companies created the **Pharmaceutical Security Institute (PSI)** to develop global security strategies focused on both prevention and enforcement to ensure public safety and product integrity. For more information, **click here**.
- Merck worked with the European Federation of Pharmaceutical Industries and Associations (EFPIA) in 2008 to publish the first joint industry statement deploring counterfeiting and the associated dangers, **"Zero Tolerance for Counterfeit Medicines"**

EXTERNAL SUPPLIER NETWORK

Merck purchases goods and services from thousands of suppliers around the world. We also work with numerous licensees worldwide to market and distribute our products.

About 1,000 suppliers make up approximately 85 percent of the company's annual spending on goods and services worldwide. Some of these are external manufacturing companies that make key ingredients or components for our products, manufacture finished products for us, package our products, or transport our medicines. Others are suppliers that provide general business goods and services such as marketing and research support, business travel, building management, or office equipment and supplies.

Merck's policy is to prequalify suppliers prior to entering a new business relationship. Merck's core expectations for labor, human rights, environment, health and safety, as well as ethical business practices are communicated during the selection process. The company also audits select suppliers based on risk. Where audits identify gaps or deficiencies, we collaborate closely to ensure that concerns are addressed in a responsible and compliant manner.

A new **Business Partner Code of Conduct** developed in 2011, will be rolled out in coming months to further communicate our expectations. The Code is based on our own Code of Conduct, *Our Values and Standards*, as well as The Pharmaceutical Supply Chain Initiative's (PSCI) **Pharmaceutical Industry Principles** and the **10 Principles of the United Nations Global Compact**.

Managing External Manufacturers

Merck's global supply strategy leverages both our internal manufacturing capabilities and those of external manufacturing companies that provide specialized skills, expertise and various types of manufacturing services. The factors Merck uses to decide whether to source internally or externally include capacity, technical capabilities, core competencies, company priorities and cost.

Merck maintains strict quality standards no matter where our products are manufactured in the world. Once we have made a decision to engage an external manufacturer, that manufacturer is required to comply with Merck's business requirements set forth in the contract regardless of geography.

Prospective external manufacturers of active pharmaceutical ingredients and finished products are screened for safety, environmental and human rights issues, in addition to quality, supply and technical competence requirements and other compliance issues. The environmental, health and safety screening includes a survey covering such topics as compliance, fatalities, major incidents and labor practices.

Based upon the screening results and the activities being undertaken by the supplier, certain external manufacturers are subject to a more detailed on-site assessment conducted by a multidisciplinary team, which may include quality, safety, environmental, technical and procurement representatives. External manufacturers contracted by Merck are reassessed using a risk-based approach; higher-risk external manufacturers are subject to more frequent on-site assessments.

Merck continues to support the **Pharmaceutical Industry Principles for Responsible Supply Chain Management Initiative (PSCI)**. The PSCI principles outline industry expectations for external manufacturers and licensees with regard to labor, health, safety, environment, ethics and management systems. The external manufacturers with which Merck contracts are expected to understand and comply with these principles.

Merck also works with the industry trade organization, Pharmaceutical Research and Manufacturers of America (PhRMA), and policy leaders to address product supply chain issues. We **support legislation** that will help provide key protections needed to increase consumer confidence that the medicines they use are safe and effective.

To learn more about our external manufacturer's selection process and compliance with product quality and safety standards, **click here**.

Ensuring Privacy of Personal Information

Many Merck suppliers, such as contract research organizations, market research agencies, systems developers and other service providers, process personal information for, or on behalf of, Merck. We require these suppliers to provide appropriate privacy protection for personal information that they handle for, or on behalf of, Merck, in accordance with our privacy policies and applicable privacy laws, regulations and guidelines.

PERFORMANCE & COMMITMENTS

Performance

In 2011, we developed a new **Business Partner Code of Conduct** that sets forth values and standards we expect of our suppliers, including support and respect for human rights.

SUPPLIER NETWORK SUMMARY[1]	2009	2010	2011
Assessment Type			
Prospective external manufacturers[2]	45	39	44
Current external manufacturers[2]	70	26	27
Total assessments	115	65	71

[1] Data prior to 2010 was based on aggregating the information from our respective individual legacy companies (pre-merger).
[2] Counts of current external manufacturers' assessments and follow-up visits have been aggregated and restated for 2009 and 2010.

Commitments

In 2012, we commit to communicate the Merck Business Partner Code of Conduct externally to increase awareness of the company's expectations, including human rights.

SUPPLIER DIVERSITY

Merck is committed to diversity both in our workforce and among our suppliers.

We cast a wide net in our search for talent, seeking qualified suppliers, large and small, from all segments of the business community.

These include minority-, women-, veteran-, service disabled-, HUBZone small-, people with a disability- and gay and lesbian-owned (LGBT) business enterprises. We believe that working with qualified suppliers from diverse segments of the business community supports our business objectives and economic development in all the communities we serve.

Merck has had a Supplier Diversity program in the United States for many years, which is managed by our Global Procurement Group. The program has four major areas of focus: strategic external outreach and globalization, supplier development and mentoring, customer-focus, and internal awareness. Minority-, women-, LGBT-, and veteran-owned business entities must be at least 51 percent owned, operated and controlled by minorities (Black, Hispanic, Asian and Native American), women, veterans, or LGBT individuals who are U.S. citizens, and the business must be headquartered in the United States or Puerto Rico.

Merck hosts Supplier Diversity Forums to increase qualified, diverse suppliers' understanding of Merck's business needs, to introduce these suppliers to the Merck business professionals who are involved in supplier selection, and to increase Merck's knowledge about current and potential diverse suppliers. Merck's most recent forums were focused in the media industry—global channel marketing companies, as well as market research firms and agencies. More than 50 diverse businesses presented their capabilities and value propositions to over 100 internal Merck stakeholders. We also recently held a capability development workshop at the Whitehouse Station, New Jersey facility at which 20 top small and diverse firms, some mentored by Merck, received tools for managing their own human resource talent. These development workshops are a collaborative effort by Merck procurement executives, sourcing managers, and the Supplier Diversity team.

In addition, our Supplier Diversity program offers coaching and feedback on performance, as well as a Supplier Diversity Mentor/Champion Program, to help develop qualified, diverse suppliers. Through the program, we conduct supplier assessments and create joint development plans with qualified, diverse suppliers that focus on increasing supplier growth, competitiveness and sustainability. Merck senior executives champion each mentored supplier and create targeted growth and development plans that include Merck-sponsored training and guidance.

We also participate in more than 30 external supplier conferences and networking events focused on minority-, women-, veteran-, and LGBT-owned businesses, and are active in external organizations, including the National Minority Supplier Development Council, the U.S. Pan Asian American Chamber of Commerce, Women's Business Enterprise National Council, National Gay and Lesbian Chamber of Commerce and the US Hispanic Chamber of Commerce.

We build into our contracts with suppliers our principles to encourage diversity in supplier development, growth and utilization. We believe that driving diverse supplier utilization through our supply chain will fuel the economy in the business community and provide a multiplier effect for diverse business utilization.

Meanwhile, we have expanded our Supplier Diversity program to the United Kingdom and Canada, where the company is a charter member of the Minority Supplier Development U.K. and a national member of the Canadian Aboriginal Minority Supplier Council, respectively. Plans for further expansion to other countries are under way.

PERFORMANCE & COMMITMENTS

Performance

SUPPLIER DIVERSITY SUMMARY FOR U.S. AND PUERTO RICO	
Percentage of spending on diverse suppliers	16.4%
Number of external supplier events supported	32

Every Merck employee and contingent worker is responsible for understanding and appropriately applying the global purchasing policy, which includes supplier diversity objectives.

Merck has more than tripled its purchases from minority-, women-, and veteran-owned suppliers in the United States and Puerto Rico over the past five years. In 2005, Merck spent 5 percent of our total U.S. and Puerto Rico procurement dollars with minority-, women-, and veteran-owned firms. We achieved 16 percent in 2011 and have plans for continued growth.

Commitments

We intend to continue to grow the Supplier Diversity program by expanding relationships with existing suppliers and introducing new suppliers whose products, services and strategies support our business objectives.

Our goal is to achieve world-class status by 2015 and maintain performance of greater than or equal to 15 percent in diverse spending year after year.

PUBLIC POLICY & ADVOCACY

We believe it is our responsibility to work with policy makers and other stakeholders to explain our views ethically and transparently.

We are committed to participating constructively and responsibly in the political process, and to providing clarifying analysis and information on the issues that affect our business and patient care.

A major element of our corporate responsibility approach is our public policy advocacy work and our outreach to stakeholders. In this section, we describe how we inform and advocate for public policies that foster research into innovative medicines and that improve access to medicines, vaccines and healthcare.

In this section, we also describe our approach to engaging with stakeholders. We believe this engagement is fundamental to our understanding of—and response to—society's expectations of our company. From drug discovery and development to distribution, our engagement with stakeholders guides our business strategy and decisions, and strengthens stakeholders' understanding of—and trust in—our business.

We recognize that our outreach activities can help highlight and address important issues, leveraging the expertise of all our stakeholders to develop sustainable solutions to such challenges as disease, lack of education, environmental challenges and corruption. Merck has pioneered far-reaching programs and partnerships, the results of which demonstrate that more can be achieved by working together than by individual stakeholders working alone—and can make a sustainable difference.

Government proposals to regulate the healthcare system may directly affect the company's business and incentives for pharmaceutical innovation. Important policy initiatives can also increase patient access to medicines and vaccines and healthcare insurance coverage—particularly for patients in disadvantaged communities and regions.

That is why it is appropriate for the company to help inform the debate on these issues in the United States and in other countries. Our participation in the political process is guided by the following principles:

- Improving patient access to healthcare, including to medicines and vaccines
- Encouraging innovation by protecting intellectual property rights, advocating for government support of basic research, and supporting efficient and effective regulatory systems, among other issues.

Merck's Executive Committee has overall governing responsibility for the company's public policy strategy, as guided by the Governance, Public Policy and Corporate Responsibility Committee of the Board of Directors. Merck's Global Public Policy Leadership Team, headed by the senior vice president of Global Public Policy and Corporate Responsibility, leads the development and communication of policy positions on major issues. Statements summarizing our position on key public policy issues are posted on the **Public Policy page** of our corporate site.

How Merck Engages

Merck engages in U.S. public policy debates primarily by communicating information to government officials and policy makers.

Our Federal Policy and Government Relations office in Washington, D.C., is responsible for advocacy activities with the U.S. Congress and other bodies of the federal government. Advocacy at the state level is managed by our State Government Affairs & Policy organization. Outside the U.S., advocacy activities are managed at the regional, country or local level, with support from regional and corporate policy staff.

To assist with our advocacy and policy analysis work, Merck and its affiliates contract with a range of private firms specializing in

government affairs advocacy. These firms employ government affairs consultants with particular expertise on issues important to the company. The Merck Action Network also informs our U.S.-based employees and retirees about important legislative issues, and serves as a vehicle for them to communicate with their members of Congress. In 2011, the Merck Action Network asked for U.S. employees to contact their members of Congress in support of two critical issues:

- Passage of the bipartisan patent reform bill to modernize the nation's system of awarding patents
- Protecting the successful Medicare Part D program from the imposition of Medicaid-style rebates that would have had a stifling effect on pharmaceutical innovation

All Merck employees and external business partners must abide by our global corporate Code of Conduct, ***Our Values and Standards***, which applies to our interactions with government officials and to advocacy activities on public policy issues. This code is intended to ensure that all information provided to governmental entities is complete and accurate to the best of an employee's knowledge and belief. In the United States, there are also important federal and state lobbying registration and disclosure laws with which Merck complies.

Our corporate policy on ethical business practices includes guidelines on the U.S. anti-kickback laws and Foreign Corrupt Practices Act, making clear that no illegal payments of any kind (monetary or otherwise) are to be offered or made to an individual or entity—including a local, state or federal government or political party official or candidate in the United States; a government or political party official or candidate of any other nation; or officials of public international organizations; at any time or under any circumstances.

To improve access to information about Merck's advocacy activities, we disclose costs associated with lobbying in the European Union and the United States. **Click here** for Merck's 2011 EU lobbying report. This estimate is based on the pro rata salary costs of MSD staff and on the proportion of employee time spent on initiatives involved in interest representation to European institutions.

In the United States, in compliance with the **Lobbying Disclosure Act**, Merck files quarterly reports with the U.S. Congress describing the issues we are lobbying about and the amount of money we spend each quarter. These reports incorporate the expenses associated with lobbying the federal government, including those incurred by our Office of U.S. Policy and Government Relations, and the portion of our trade association dues associated with federal lobbying.

Our Top Lobbying Issues

In the United States in 2011, the top five issues at the federal level for which Merck lobbied were federal deficit reduction; the reauthorization of the Prescription Drug User Fee Act; defense of Medicare Part D; implementation of the Affordable Care Act; and corporate tax reform.

In the United States in 2011, the top five issues at the state level for which Merck lobbied were state implementation of the health benefit exchange component of the federal Affordable Care Act; budget support to help ensure patient access to medicines in state Medicaid programs; continued funding for programs providing access to immunizations; initiatives to address pharmaceuticals in the environment; and legislation affecting patient access to over-the-counter medicines.

On a European level in 2011, our advocacy focused on fostering a framework for a sound pricing regime in a Europe of diverse economies; support for government vaccination programs; standards for health technology assessment and health literacy; and implementation of the Anti-Counterfeiting Directive and Pharmacovigilance Directive.

Merck's senior vice president of Global Public Policy and Corporate Responsibility presents the company's advocacy priorities to members of Merck's Executive Committee and the Governance, Public Policy and Corporate Responsibility Committee of the Board of Directors annually, and provides periodic updates throughout the year.

Engaging Responsibly in Europe

Merck voluntarily participates in the European Commission's Register of Interest Representatives initiative and follows the corresponding Code of Conduct. Merck supports efforts to make this code the standard for transparency and disclosure within the European Union and encourages other companies to participate in the register.

Political Contributions

Where permitted by law in the United States, Canada and Australia, the company provides corporate political contributions, primarily to the electoral campaigns of individual candidates.

Merck employees can also participate in the political process by joining a nonpartisan political action committee (PAC), through which they can pool their financial resources to support federal and state candidates. Except for administrative expenses, the Merck Employees Political Action Committee (Merck PAC) is completely funded with voluntarily contributions from eligible Merck employees. The PAC supports legislators from both major parties who understand and appreciate the work Merck does to discover and develop medicines and to make them available to the patients who need them.

Merck's corporate policy governing its corporate and PAC contributions can be found **here**. In addition, we have developed the **Merck Principles Governing Corporate and Political Action Committee Spending**. These principles are modeled on provisions in the **Model Code for Political Spending**, established by the **Center for Political Accountability**, and are intended to promote corporate accountability.

Merck has a formal **PAC Contributions Committee** that makes decisions on spending for the Merck PAC. This committee also makes decisions on the company's corporate political contributions. The committee is chaired by our executive vice president and general counsel and includes senior managers representing different divisions and corporate functions. The general counsel approves contribution recommendations, following review and approval by the committee.

To ensure compliance with Merck policy and federal and state law, outside legal experts provide periodic guidance to the company on required disclosure of its political activities. We also perform periodic audits to assess and enforce compliance with Merck's policy governing its corporate and PAC contributions, and we require those individuals who recommend corporate political contributions in the United States to certify their knowledge of and adherence to our corporate Policy and Principles Governing Corporate Political and Political Action Committee Contributions.

As required by Merck policy and procedures, Merck's executive vice president and general counsel sends an annual report on the company's corporate political contributions for the previous year to the Merck Board of Directors. The report discloses contributions in the United States, Australia and Canada, including the name of each candidate, committee or event and the amount disbursed. It also reports on trade association dues spent on lobbying and political activity in the United States for dues greater than $25,000. Merck's senior vice president of Public Policy and Corporate Responsibility submits a midyear report on corporate political contributions to the Governance, Public Policy and Corporate Responsibility Committee of the Board of Directors. For both reports, which also describe any changes in our policies, we invite comments and questions.

To improve access to information about Merck's corporate political and PAC contributions in the United States, the company semiannually posts its contributions, categorized by state, candidate and amount. We also disclose any contributions to entities known as 527 organizations. To view a full listing of Merck's corporate and PAC contributions made within the United States in 2011, please **click here**.

Our Corporate Political Contributions

In 2011, Merck spent a total of $479,800 in U.S. corporate political contributions. These contributions supported the campaigns of 381 candidates in the states plus the District of Columbia. The breakdown by party affiliation was 46.5 percent for Democrats and 53.3 percent for Republicans. Support also was provided under this program to state legislative leadership committees, to industry-affiliated PACs, and to a number of national organizations representing elected state officials. The latter groups meet periodically to discuss policy issues. Examples are the Republican Governors Association and the Democratic Governors Association. Information on all contributions can be assessed through the above link. Merck representatives involved in state government affairs activities made the recommendations for specific contributions. These recommendations were reviewed and approved by the Corporate Political Contributions Committee. Outside legal counsel conducted a thorough review of all proposed contributions to ensure that they were permitted under state law. Final approval was provided by the general counsel of Merck.

Merck also provides grants to organizations that represent elected officials to support public policy advocacy. Groups include but are not limited to the American Legislative Exchange Council, the Council of State Governments, the National Association of Latino Elected/Appointed Officials, the National Black Caucus of State Legislators, the National Conference of State Legislatures, the National Governors Association, the National Hispanic Caucus of State Legislators, and the National Lieutenant Governors Association. We disclose all public policy grants as part of our **general grants disclosure**.

The only other countries in which we provide corporate contributions to candidates or political parties are Canada and Australia. These contributions are subject to the same policies and governance procedures discussed above. To view Merck's 2011 contributions in Canada and Australia, please **click here**.

Archived corporate political contribution reports are available **here**.

Merck's vice president of State Government Affairs is cochair of the **Conference Board Committee on Corporate Political Spending**, which is dedicated to accountability, disclosure, education and engagement on issues of corporate political activity. In 2011, the committee released its report, **"Corporate Political Spending: Policies and Practices, Accountability and Disclosure."** Merck also supported the development of the ***Handbook on Corporate Political Activity: Emerging Corporate Governance Issues***, which grew out of discussions held at two roundtables organized by The Conference Board Governance Center in 2010.

Industry Groups and Trade Associations

Merck is a member of numerous industry and trade groups. We work with these groups because they represent the pharmaceutical industry and business community in debates led by governments and other stakeholders, and because they help the industry reach consensus on policy issues.

When our trade associations actively lobby on our core business issues, outlined above, we seek to align their positions with our own. There are times, however, when we may not share the views of our peers or associations—on both issues that are central to our business and those that, while important, are not directly material to our mission. With Merck representatives on the boards and committees of industry groups and trade associations, we can voice questions or concerns we may have about policy or related activities. We may even recuse ourselves from related trade association or industry group activities when appropriate.

Merck's executive vice president and general counsel sends an annual report to the Merck Board of Directors on trade association dues spent the previous year on lobbying and political activity in the United States for dues greater than $25,000.

The Governance, Public Policy and Corporate Responsibility Committee of the Board of Directors has ongoing oversight of the company's membership in trade associations and grassroots lobbying activities.

For a list of industry and trade groups of which we are members and our dues (dues that are greater than $25,000) to trade associations that are used for political purposes, please **click here**.

Through our top-three trade associations (listed below), we engaged on the following policy issues in 2011:

- Pharmaceutical Research and Manufacturers of America (PhRMA): Federal deficit reduction; the re-authorization of the Prescription Drug User Fee Act; defense of Medicare Part D; implementation of the Affordable Care Act; and corporate tax reform.
- U.S. Chamber of Commerce: Federal deficit reduction; the reauthorization of the Prescription Drug User Fee Act; defense of Medicare Part D; corporate tax reform; and the Korea-U.S. Free Trade Agreement
- Biotechnology Industry Organization (BIO): Federal deficit reduction; the reauthorization of the Prescription Drug User Fee Act; and defense of Medicare Part D

HUMAN RIGHTS

Human rights are an important element of Merck's commitment to conducting our business in a responsible manner.

Merck respects human rights as recognized by the principles of the United Nations Global Compact and as defined in the United Nations Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights, the International Covenant on Civil and Political Rights, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, and the core labor standards set out in the International Labor Organization's (ILO's) Declaration on Fundamental Principles and Rights at Work.

Our Belief

Merck believes in the dignity of every human being and in respecting individual rights. The company has established global policies and processes to demonstrate this respect, including Merck's Global Policy on Human Rights and *Our Values and Standards* (Code of Conduct), which reaffirms our commitment to scientific excellence, ethics and integrity.

Our Values and Standards outlines our responsibilities to our customers, our fellow employees, our suppliers and our communities, and to societies around the world, as well as to our shareholders. Those responsibilities are not only the foundation of our company and what we stand for, but the basis of our success. Our Global Policy on Human Rights further strengthens our commitment by defining specific roles and responsibilities to ensure effective implementation across Merck.

Our Aim

We seek to prevent or mitigate adverse human rights practices that are directly linked to our operations, products or services.

Our Commitment

Our commitment is formalized and manifested through various policies including our Human Rights Policy, *Our Values and Standards* (Code of Conduct), our **Global Labor Relations Guiding Principles** and our environmental governance and management systems. Specifically:

- **Labor Standards:** We maintain labor standards including hours, conditions, wages and overtime pay practices that are in compliance with the laws of the jurisdictions in which we operate.
- **Health & Safety:** We provide a safe and healthy work environment in all our operations regardless of size or function
- **Freedom of Association:** We respect our employees' right to freedom of association.
- **Forced & Child Labor:** We condemn the use of forced labor and exploitative child labor as defined by the International Labor Organization's 1998 Declaration on Fundamental Principles and Rights at Work.
- **Wages & Benefits:** We compensate our employees in accordance with market practice in a manner that supports their ability to meet their basic needs. We also offer our employees the opportunity to improve their skills and capabilities.
- **Diversity & Equal Opportunities:** We value diversity and strive to provide equal opportunities for all individuals.
- **Privacy:** We respect individual privacy expectations and protect personal information that we collect, use and disclose in connection with our business.
- **Access to Healthcare:** We respect the right to health for all people and work toward expanding access to care.
- **Customers:** We take into consideration the economic, social, geographic and cultural diversity of our customers as we develop and market our products.
- **Business Partners:** We expect appropriate standards of conduct and respect for human rights, consistent with our own, from our suppliers, contractors, vendors and partners.

- **Communities:** We respect the human rights of our neighbors in those areas where we have operations or facilities.
- **International Standards:** We respect international standards on human rights and, where possible, contribute by working with partners.
- **Non-Discrimination:** We do not discriminate in employment, contracting, wages, promotion, working conditions or in any other opportunity based on race, color, gender, gender identity, gender expression, genetic information, age, religion, ethnicity, national origin, ancestry, sexual orientation, marital status, disability or any other legally protected characteristic subject to compliance with applicable law.
- **Compliance:** We adhere to local laws. When local protection is insufficient or nonexistent, we observe even more demanding standards consistent with our human rights policy to the extent that these standards do not violate local laws and regulations.

Our Approach

Merck's Global Policy on Human Rights was developed with input from employees in key functional areas and from external stakeholders. It was approved by Merck's Executive Committee, which is also responsible for ensuring that governance processes are in place to provide oversight of the implementation and execution of the policy.

Merck's executive vice president/chief ethics and compliance officer, who is a member of Merck's Executive Committee, advises the Executive Committee on human rights–related issues. Noncompliance with Merck's human rights policy is subject to escalation, investigation and remediation in accordance with internal corporate policies.

Resources for Employees

Merck's Office of Ethics serves as an employee resource for raising concerns about ethical issues, including noncompliance with corporate policies. Employees globally can contact (via toll-free telephone or intranet) the AdviceLine, which is run by an outside vendor. Employees also can contact the Office of Ethics directly and speak with an ethics officer or ombudsman. This program confidentially addresses employees' concerns, without fear of retaliation, about conduct that may be inconsistent with Merck's policies, practices, values and standards.

Engagement with Suppliers

We expect our suppliers and service providers to comply with human rights and environmental standards that are compatible with our own and to conduct their business in accordance with the highest ethical standards throughout their entire supply chain. A new **Business Partner Code of Conduct**, developed in 2011, will be rolled out in coming months to further communicate our expectations. The code is based on our own Code of Conduct, *Our Values and Standards,* as well as the Pharmaceutical Supply Chain Initiative's (PSCI's) **Pharmaceutical Industry Principles for Responsible Supply Chain Management** and the **10 principles** of the United Nations Global Compact. Approved by Merck's Compliance Summit in November 2011, it will apply to all organizations that provide us with goods or services.

Learn more about environmental, labor and human rights in the supply chain.

PERFORMANCE & COMMITMENTS

HUMAN RIGHTS OF OUR EMPLOYEES	2009	2010	2011
Worldwide employees represented by an independent trade union or covered by a collective bargaining agreement	NA	30%	31%

NA: Data not available.

In 2011, we focused our resources on:

- Developing a new Human Rights Global Policy consistent with internationally accepted standards, and securing executive-level approval
- Communicating our Human Rights Global Policy internally to all Merck employees worldwide, and defining roles and responsibilities for implementation
- Developing a new Business Partner Code of Conduct that sets forth values and standards for our business partners, including support and respect for human rights

In 2011, we did not conduct a human rights assessment of our facilities in high-risk countries, as originally planned. Instead, we believe the activities noted above are more meaningful to the risks our business faces, provide a solid foundation for ongoing monitoring and capacity-building, and will have greater impact over the long term.

In 2012, we plan to:

- Publically disclose a new Public Policy Statement on Human Rights
- Communicate the Merck Business Partner Code of Conduct to our external business partners to increase awareness of Merck's expecations, including human rights
- Translate the Merck Business Partner Code of Conduct into multiple languages and make versions available to external business partners
- Ensure that Merck's expectations for human rights continue to be considered as part of the prequalification and selection processes for external business partners

HUMAN RIGHTS OF OUR EMPLOYEES

Respect for human rights is embedded in the company's Code of Conduct.

In addition to ***Our Values and Standards*** and our *Know the Code* and *Safe to Speak Up* training programs, Merck established **Global Labor Relations Guiding Principles** to support our Global Labor Relations Strategy and to ensure consistency worldwide. These principles support our commitment to respect employees' lawful freedom of association globally.

Mechanisms to Report Concerns

There are several ways in which employees can report suspected human rights violations:

- As a first step, employees can seek out an immediate supervisor or manager to discuss suspected violations
- If the matter is not successfully resolved, or if concerns remain, employees are encouraged to pursue the issue with their next level of management or Human Resources
- Employees can also contact the Merck AdviceLine, either by telephone or the intranet, 24 hours a day, seven days a week. Staffed by an independent organization, the AdviceLine allows employees to remain anonymous, in accordance with applicable legal standards for operation of whistle-blowing hotlines.
- Another option is the Merck Ombudsman Program, which offers a safe haven for U.S. employees to express work-related issues without fear of retaliation. This program confidentially addresses employees' concerns about conduct that may be inconsistent with Merck's policies, practices, values and standards.

HEALTH AS A HUMAN RIGHT

Health as a universal human right is recognized by the United Nations Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights (ICESCR).

Although government has the primary responsibility for managing a health system that ensures the health of their citizens, pharmaceutical companies have a substantial role to play in realizing this right.

The role of the pharmaceutical industry in respecting and promoting health as a human right is complex. We believe that our most basic role is our core activity of discovering, developing and delivering medicines and vaccines to address unmet medical needs.

We also recognize our ethical duty to support governments in their efforts to protect the right to health by "doing no harm." We do this in a number of ways, including by:

- Monitoring and reporting on the safety of our products
- Providing healthcare workers and consumers with important information on the benefits and side effects of our products
- Safeguarding the health, safety and privacy of patients involved in our clinical trials

Supporting the Right to Health

Beyond these efforts, we also have the ability—and we believe the responsibility—to support the right to health and to effect positive change. We do this by promoting timely product registration; by helping to improve access to new medicines and vaccines; and through partnerships and public policy advocacy that seek to strengthen healthcare capacity and address deep-rooted and multifaceted barriers to access in ways that are aligned with our business mission and core capabilities.

Others have roles and responsibilities, too. Industrialized countries, where most research in life sciences takes place, must continue to foster innovation by funding basic research and supporting related institutions, and by recognizing the value of innovative medicines and vaccines.

Developing countries also must continue to make healthcare a budget priority; remove taxes and import duties on medicines that unnecessarily raise the price of medications; and limit product diversion to richer countries by price arbitragers. Emerging or middle-income countries should do the same, and also recognize that they can and should pay more than the poorest countries for medicines, rather than take actions that remove incentives for innovation.

TRANSPARENCY DISCLOSURES

Merck aspires to be open and transparent about how it operates in order to earn and retain the trust and confidence of its customers, employees, shareholders and other important stakeholders.

We will do this by proactively providing nonproprietary information to stakeholders about Merck's business, how we operate, and decisions we take, which will help stakeholders make informed decisions about their interactions with the company and its products.

We will disclose information through a variety of mechanisms, including our financial disclosures, corporate responsibility reporting, participation in voluntary efforts such as the Carbon Disclosure Project, through the media, and through one-on-one stakeholder discussions. As part of our commitment to increase transparency, we also disclose information on our website about our business in the following areas:

Grants to Medical, Scientific and Patient Organizations

Merck has a leadership role as a global corporate citizen in our respective industries. We believe that providing support through grants or donations to third party medical, scientific and patient organizations is an important way to advance our mutual objectives to improve health and advance patient care. We have robust standards and policies in place to ensure that our grants are intended and provided in support of improving patient care, and are not promotional or likely to be perceived as being promotional in nature, or provided to induce or reward prescription of our products. Further, any grant or donation must also be permitted by and aligned with local country laws and regulations. **Learn more**.

Payments to U.S.-based Healthcare Professionals

As an early supporter of the Physician Payments Sunshine Act, we believe in broad disclosure of financial relationships between physicians and the pharmaceutical industry. In 2009, we began voluntarily disclosing all payments to U.S.-based healthcare professionals who speak on behalf of Merck or our products. Starting in June 2012, reports will include payments and transfers of value to U.S.-licensed physicians including those who consult and/or perform research on behalf of Merck. **Learn more**.

Philanthropic Grants and Contributions

Starting in March 2009, Merck began reporting all philanthropic grants made through the Office of Corporate Philanthropy and The Merck Company Foundation. **Learn more**.

Corporate Political Advocacy and Contributions

Merck is committed to participating constructively and responsibly in the political process. To improve access to information about Merck's advocacy activities, Merck discloses its costs associated with lobbying in the European Union and the United States. Where permitted by law in the United States, Canada and Australia, the company makes corporate political contributions, primarily to the electoral campaigns of individual candidates.

To improve access to information about Merck's corporate and political action committee contributions in the United States, Merck semiannually posts the company's contributions categorized by state, candidate and amount. Merck also discloses any contributions to committees known as 527 organizations or organizations organized under the 501c(4) section of the U.S. tax code. Merck posts its contributions in Canada and Australia annually.

Since 2008, we have also been disclosing the portion of dues that major U.S.-based trade associations report to us as being used for advocacy and/or political activities where dues are >$25,000. We encourage all trade associations to which we belong to publicly disclose their political activities as well. **Learn more**.

Post-Marketing Requirements

Merck recognizes the importance of providing transparent information about the status of our marketing and development activities after a product has been approved by regulatory authorities. This information can help ensure health care providers and patients remain informed about our products.

To inform the public about post-marketing activities, Merck will, on a quarterly basis, post information concerning post-marketing requirements (PMRs) for U.S. marketed products intended for human use on this website. Information will include the nature and status of the PMRs for the life cycle of a marketed product, in accordance with U.S. regulations. Information will include reference to clinical, non-clinical, or pharmacovigilance studies / trials that have been identified as PMRs. Additional background on post-marketing requirements is available at the **FDA Web Site. Learn more**.

Clinical Trials Disclosures

Since 2007, we have registered at trial initiation all clinical trials in patients in which treatment is assigned that the company sponsors and conducts worldwide on ClinicalTrials.gov. We also disclose results from registered clinical trials of marketed products—regardless of outcomes—on **www.ClinicalTrials.gov. Learn more.**

Clinical Research Protocols

Effective July 1, 2011, when we submit a manuscript on a study of an investigational or an approved medicine or vaccine to a biomedical journal, Merck will voluntarily include the protocol and statistical analysis plan. Merck previously supplied this material only upon request. Upon a journal's acceptance of the manuscript for publication, we will provide the journal, at its own discretion, with the opportunity to post on its website the key sections of the protocol, including the objectives and hypotheses, patient inclusion and exclusion criteria, study design and procedures, efficacy and safety measures, the statistical analysis plan, and any amendments relating to those sections. Read the full **press release**.

Employee Diversity

We consider diversity and inclusion integral parts of the culture we seek to build. We were one of the first companies in the United States to annually disclose our Equal Employment Opportunity data and continue to do so annually. **Learn more**.

DISCLOSURE OF GRANTS INSIDE THE UNITED STATES

Merck has a leadership role as a global corporate citizen in our respective industries.

We believe that providing support through grants or donations to third-party medical, scientific and patient organizations is an important way to advance our mutual objectives to improve health and advance patient care. We have robust standards and policies in place to ensure that our grants are intended and provided in support of improving patient care, and are not promotional or likely to be perceived as promotional in nature, or provided to induce or reward prescribing our products. Further, any grant or donation must also be permitted by and aligned with local country laws and regulations.

Merck discloses grants of more than $500 provided by the company's Global Human Health division to U.S. organizations in support of independent, accredited educational programs for healthcare professionals, as well as grants to patient organizations and other medical education or scientific societies/organizations in the United States, Europe, the Middle East, Africa and Canada.

Merck updates grants to medical, scientific and patient organizations quarterly in the United States, and annually for ex-U.S. jurisdictions. We will continue to expand our disclosure into other regions as we work to build the infrastructure and systems necessary to allow us to report this information on a global basis. The following three principles guide our approach to providing financial support to medical, scientific and patient organizations:

Independence

Merck respects the independence of medical, scientific and patient organizations and refrains from using our financial support to influence the policies of organizations or to promote specific medicines.

Transparency

Merck supports transparency of financial support provided to medical, scientific and patient organizations. We believe this is an important step in building public trust with both Merck and those to whom we provide support. Making our support public also enhances the visibility of Merck's commitment to help advance health and science.

Compliance with Local Laws

In providing financial support to medical, scientific and patient organizations, Merck will comply with all relevant local laws and regulations.

As part of our commitment to these principles, Merck regularly reviews and updates our Code of Conduct to reaffirm our mission and commitment to scientific excellence, ethics and integrity. These principles are also reflected in the company's corporate policies, procedures and guidelines, which every Merck employee is responsible for understanding and appropriately applying.

Learn more about our disclosure of grants to patient organizations outside of the United States.

DISCLOSURE OF GRANTS OUTSIDE THE UNITED STATES

Disclosure of grants to patient organizations has been mandatory in Europe since March 2009. However, in Europe, the Middle East and Africa, Merck voluntarily began disclosing financial support to patient organizations in 2008, and in Canada in 2009.

In October 2009, Merck in Europe, the Middle East, Africa and Canada also began to disclose grants to other third-party organizations such as medical societies and scientific organizations. The information disclosed includes the organization, the amounts received, the dates of payment and the projects for which the money was used. Disclosures include all donations and charitable contributions, grants, and membership fees to professional societies or other medical or scientific organizations. Merck was also a member of the working group to develop the European Federation of Pharmaceutical Industries and Associations (EFPIA) Code of Practice on Relationships between the Pharmaceutical Industry and Patient Organisations, which became effective on July 1, 2008.

Merck updates grants to medical, scientific and patient organizations annually for ex-U.S. jurisdictions.

DISCLOSURES OUTSIDE THE UNITED STATES

Grants and Donations—2nd half of 2011

Algeria
Austria
Belgium
Bosnia & Herzegovina
Bulgaria
Canada
Croatia
Cyprus
Czech Republic
Denmark
Egypt
Estonia
Finland
Germany
Greece
Gulf
Hungary
Ireland
Israel
Italy
Jordan
Latvia
Lebanon
Lithuania
Morocco
Netherlands
Norway
Poland
Portugal
Romania
Russia
Saudi Arabia
Serbia & Montenegro
Slovak Republic
Slovenia
Spain
Sweden
Switzerland
Turkey
Ukraine
United Kingdom
MSD Headquarters

Grants and Donations—1st half of 2011

Algeria
Austria
Belgium
Bosnia
Bulgaria & Macedonia
Canada
Croatia
Cyprus
Czech Republic
Denmark
Egypt
Estonia
Finland
France
Germany
Greece
Gulf Market
Hungary
Iraq
Ireland
Israel
Italy
Jordan
Latvia
Lebanon
Lithuania
Morocco
MSD Europe
Netherlands
Norway
Poland
Portugal
Romania
Russia
Saudi Arabia
Serbia & Montenegro
Slovakia
Slovenia
South Africa
Spain
Sweden
Switzerland
Syria
Tunisia
Turkey
Ukraine
United Kingdom

Grants made in 2010

Algeria
Austria
Belgium
Bosnia & Herzegovina
Bulgaria & Macedonia
Canada
Croatia
Cyprus
Czech Republic
Denmark
Egypt
Estonia
Finland
France
Germany
Greece
Gulf
Hungary
Iraq
Ireland
Israel
Italy
Jordan
Kazakhstan
Latvia
Lebanon
Lithuania
Morocco
Netherlands
Norway
Poland
Portugal
Romania
Russia
Saudi Arabia
Serbia & Montenegro
Slovak Republic
Slovenia
South Africa
Spain
Sweden
Switzerland
Syria
Turkey
Ukraine
United Kingdom
MSD Headquarters

Grants made in 2009

Algeria
Austria
Belgium
Bulgaria
Canada
Croatia
Cyprus
Denmark
EMEAC Headquarters
Estonia
Finland
France
Germany
Ireland
Israel
Italy
Jordan
Kazakhstan
Kuwait
Latvia
Lebanon

Lithuania
Morocco
Netherlands
Norway
Poland
Portugal
Romania
Russia
Saudi Arabia
Serbia
Slovenia
South Africa
Spain
Sweden
Switzerland
Turkey
United Kingdom

Grants made in 2008

Algeria
Austria
Belgium
Bulgaria
Croatia
Cyprus
Denmark
EMEAC Headquarters
Estonia
Finland
France
Germany
Ireland
Israel
Italy
Jordan
Latvia
Lithuania
MSD Europe
Netherlands
Norway
Poland
Portugal
Romania
Schering-Plough
Serbia
Slovenia
South Africa
Spain
Sweden
Switzerland
United Kingdom

PAYMENTS TO U.S.-BASED HEALTHCARE PROFESSIONALS

We believe in broad disclosure of financial relationships between physicians and the pharmaceutical industry.

As an early supporter of the Physician Payments Sunshine Act (PPSA), we believe in broad disclosure of financial relationships between physicians and the pharmaceutical industry. In October 2009, we began voluntarily disclosing all payments to U.S.-based healthcare professionals who speak on behalf of Merck about our products and other healthcare issues.

In April 2012, Merck expanded its payments report to include post-merger speaking activities related to legacy Schering Plough, Merck/Schering Plough and Inspire Pharmaceutical products. The new report covers payments made in 2011 and provides data for 2,553 physicians who participated in an average of 5.4 programs each and earned an average of $1,978 per program.

As of June 2012, reports will be posted quarterly reflecting payments and transfers of value to U.S.-based physicians including those engaged in clinical research activities. We include both direct payments to individual physicians, as well as "indirect" payments to the research entity/institution with the name of the associated principal investigator(s). The latter does not imply a direct payment to the individual but rather support for the work that they are doing in the context of the research on behalf of the entity/institution.

Later, Merck will be implementing the Physician Payments Sunshine Act provisions of the U.S. Affordable Care Act, which requires pharmaceuticals manufacturers to annually disclose information on certain additional payments and other transfer of value furnished to U.S. licensed physicians and U.S. teaching hospitals to the Department of Health and Human Services once the regulations are finalized.

- **Payments made in 2012 (A–M)**
- **Payments made in 2012 (N–Z)**
- **Payments made in 2011**
- **Payments made in 2010**
- **Payments made 3Q–4Q of 2009**

The Importance of Engaging with Medical and Scientific Leaders within the United States

Merck engages with healthcare professionals around the world to conduct Merck-sponsored clinical studies on the safety and effectiveness of our products. We conduct these studies in accordance with strict regulatory requirements with "real world" physicians and their patients in order to learn more about our products and bring new medicines and vaccines to patients who need them. Once a product is approved for marketing, we continue to conduct studies in order to monitor ongoing safety and effectiveness.

Merck also engages with healthcare professionals through the Merck Investigator Studies Program (MISP) where the mission is to advance the delivery of quality healthcare by supporting investigator-initiated original research that will enhance the understanding of disease entities and their treatment. This program is open to all academic and community-based physicians and researchers worldwide who are interested in conducting their own research. Learn more at: **www.merckiisp.com**

Merck is very committed to the discovery and development of important new drugs and vaccines through collaboration with scientific leaders from academic and scientific organizations from around the world. Advice in the form of consulting engagements with external Medical and Scientific experts result in meaningful, scientific exchanges that bring to Merck real-world knowledge and perspectives. These critical exchanges contribute to advancing both science at Merck and in the broader scientific community, and ultimately help benefit human health. Merck also engages physicians as speakers in the U.S. through Merck Medical Forums which are designed to deliver balanced medical and scientific information to healthcare professionals so patients have access to the medicines and vaccines they need and use these products correctly. These programs are structured consistent with PhRMA Code on Interactions with HealthCare Professionals and are conducted in compliance with FDA regulations, to help ensure that any Merck product information is presented in an appropriately balanced manner, with respect to potential benefits and risks.

CORPORATE GOVERNANCE

Corporate governance structures are established to make sure corporations are accountable to their owners—the shareholders.

Our corporate governance goes beyond the company's relationship to our shareholders, because it reflects our relationship to society, and issues that matter to our key stakeholders can very quickly become important issues for our shareholders. As such, our objective is to balance fiduciary duty and accountability to generate long-term shareholder value, while also considering, in a transparent manner, the concerns of other stakeholders.

The Board

Our Board's primary mission is to represent and protect the interests of the company's shareholders. The Board meets a minimum of six times per year and as otherwise needed to review our progress on a wide variety of measures. In overseeing the affairs of the company, including our governance, the Board has several **committees** to help fulfill our obligations to Merck shareholders.

As of December 1, 2011, Kenneth C. Frazier, Merck's chairman of the board, president and chief executive officer, is the only Merck executive on the Board. Mr. William B. Harrison, Jr., serves as the Board's lead director. As lead director, Mr. Harrison confers with management on matters involving the Board and serves as a liaison to shareholders on investor matters. Mr. Frazier is not a member of any of the Board's committees; only independent directors serve on these committees.

The Board has a balanced membership, representing relevant areas of experience, types of expertise and backgrounds. While it is the Merck's philosophy that the full Board should consider and act on matters of significance, as appropriate, the committees assist it in carrying out its responsibilities and provide greater focus in key areas.

Board Independence & Performance

Some shareholders believe that the Board should be completely independent. Our policy is that the Merck Board should consist of a substantial majority of independent directors in accordance with the standard for independence established in our **Policies of the Board**. As noted above, Mr. Frazier is the only member of the Board who is not independent.

For additional details on our Board's leadership structure, please see page 16 of **Merck's 2012 Proxy Statement**.

Corporate Management

Merck chairman, president and chief executive officer Kenneth C. Frazier is accountable to the Merck Board. Merck's **Executive Committee**, an internal management committee of Merck executives who report directly to Mr. Frazier, meets monthly and as needed to review the company's progress and to attend to other matters affecting the company.

Compliance

Merck's Board of Directors and senior management, including the company's chief ethics and compliance officer and Corporate Compliance Committee, oversee the company's global compliance program. Merck's compliance program is designed to maintain a culture that promotes the prevention, detection and resolution of potential violations of law or company policies. The program is dynamic—involving regular assessments to ensure the program is responsive to the company's evolving business and associated compliance risks. Since the merger, the Global Compliance Organization (GCO) has been headed by Richard S. Bowles, executive vice president and chief ethics and compliance officer, and reports directly to the CEO and president. After more than 30 years of service to Merck and Schering-Plough, Dr. Bowles retired from the company in June 2012. Effective June 25, 2012, Michael Holston became our new chief ethics and compliance officer. Mr. Holston most recently

served as executive vice president and general counsel for Hewlett-Packard Company, where he oversaw compliance.

The Corporate Compliance Committee meets quarterly to oversee the development and implementation of the company's compliance program. Each division within Merck, through its divisional compliance officer, periodically assesses the division's respective compliance risk areas; sets priorities for addressing risks; participates in the development of training and other educational programs; addresses the need for appropriate monitoring and auditing programs; and establishes performance objectives and reviews to assess the effectiveness of the division's compliance program.

Divisional compliance officers present regular updates on the status of their compliance programs to Merck's Corporate Compliance Committee. The chief ethics and compliance officer gives a quarterly report of the state of ethics and compliance at Merck to the Audit Committee of the Board to help it meet its governance and oversight responsibilities.

Environment, Health and Safety Governance

We are committed to full compliance with all environmental and employee health and safety laws and regulations, and are also committed to actively identifying, understanding and addressing potential environmental, health and safety (EHS) risks and concerns of our stakeholders.

The Executive Committee has established an EHS Council to provide enterprisewide leadership and governance of our EHS compliance and performance. In addition to a corporate EHS policy, we are continuing to implement and sustain a robust compliance management program that effectively oversees and manages EHS issues affecting the company in order to meet and exceed our responsibilities and commitments.

Risk Management

Merck's Corporate Audit and Assurance Services group is accountable to the Audit Committee of the Merck Board for assessing the adequacy and effectiveness of the company's control environment related to financial reporting and operating processes. This includes the appropriate management and oversight of key company risks, in accordance with our corporate policy on audit, control and risk management.

Disclosure

We are committed to a policy of full, true, timely and plain-English disclosure of all material information in order to keep shareholders and the investing public informed about the corporation's business and operations. Accordingly, we have established a corporate disclosure policy that articulates the standards, processes and governance for the company's disclosure practices. Pursuant to the policy, Merck's Disclosure Committee oversees the company's disclosure practices and disclosure obligations.

Governance of Our Research Agenda

The Research Leadership Team, headed by the executive vice president and president, Merck Research Laboratories (MRL), develops divisional strategy, allocates resources and manages the portfolio of MRL products. The Research Leadership Team is made up of the heads of six functional areas within MRL. Each area provides expert, efficient support of our drug candidates-ushering them from drug discovery through product-life-cycle management.

Safety Monitoring

Merck has an efficient global system of pharmacovigilance that compiles, assesses and reports adverse experiences related to our products. Our global safety teams within MRL are responsible for the safety evaluation of our medicines and vaccines. In parallel, at the country level, local pharmacovigilance teams at our subsidiaries worldwide are responsible for ensuring that safety information is collected and reported to our global safety staff at headquarters and to local regulatory authorities. For more information, please **click here**.

Corporate Responsibility Governance

Merck's Office of Corporate Responsibility identifies corporate responsibility issues that are important to our business success and our stakeholders, and formally manages targets and performance for those issues. **Learn more**.

MERCK
Be well

GIVING AT MERCK

To help the world be well, the Merck Company Foundation and Merck's Office of Corporate Philanthropy support qualified nonprofit organizations and innovative programs that are tackling humanity's key challenges.

GIVING GUIDELINES

As a general rule, The Office of Corporate Philanthropy and The Merck Company Foundation do not support the following types of programs and/or organizations.

- Individuals and for-profit organizations
- Political organizations, campaigns and activities
- Fraternal/labor/veteran organizations and activities
- Religious organizations or groups whose activities are primarily sectarian in purpose (programs open to the community or providing a community benefit may qualify for funding)
- Organizations that discriminate on the basis of race, gender, sexual orientation, marital status, religion, age, national origin, veteran status or disability
- Capital campaigns and endowments
- Basic or clinical research projects, including epidemiological studies, clinical trials or other pharmaceutical studies
- Direct medical care, including medical screening or testing and the purchase of medicines, vaccines or medical devices
- Meetings, conferences, symposia or workshops that do not have and are not associated with long-term program objectives
- Unrestricted general support
- Fellowship/tuition support for training purposes intended for a specific individual or institution
- Programs that directly support marketing and/or sales objectives of the company
- Fund-raising events such as concerts, sporting events, annual appeals or membership drives and benefit dinners or galas (unrelated to organizations whose mission reflects OCP/TMCF giving priorities)

FOUNDATION

The Merck Company Foundation—a U.S.-based, private charitable foundation established in 1957—is funded entirely by the company and is Merck's chief source of funding support for qualified nonprofit charitable organizations.

Since its inception, The Merck Company Foundation has contributed more than $700 million to support initiatives that address important societal needs in a manner consistent with Merck's overall mission to help the world be well. The mission of the Foundation is to support organizations and innovative programs that are aligned with our three priority areas: **health**, **education** and **community**. We also share outcomes, lessons learned and best practices from our initiatives to contribute knowledge to and help advance progress in our three priority areas.

Health

We strive to improve healthcare quality and capacity, increase access to care for underserved populations, and work to understand and alleviate barriers to good health through strategic collaborations and program investments. Key initiatives include:

- **The African Comprehensive HIV/AIDS Partnerships (ACHAP)**
- **BroadReach Institute for Training and Education—Management and Leadership Academy**
- **China/MSD HIV/AIDS Partnership (CMAP)**
- **The Children's Inn at NIH**
- **EngenderHealth—Mobile Outreach Program**
- **FXB Center, School of Nursing, University of Medicine and Dentistry of New Jersey—Health Worker Training Program**
- **Merck Childhood Asthma Network (MCAN)**
- **Millennium Villages Community Health Worker Program**
- **The Alliance to Reduce Disparities in Diabetes**
- **The Merck Vaccine Network—Africa**
- **Rx to Fight Hunger**
- **Save the Children—Frontline Health Workers initiative**

Education

We foster educational opportunity and academic success through programs that seek to eliminate achievement gaps among disadvantaged populations and to expand quality education in science. Key initiatives include:

- **The Merck Institute for Science Education**
- **The United Negro College Fund/Merck Science Initiative**
- **The Alliance/Merck Ciencia (Science) Hispanic Scholars Program**
- **AAAS/Merck Undergraduate Science Research Program**
- **Teach for America**
- **University of Colorado—XSci Extraordinary Educator Experiences**
- **W.E.B. Dubois Institute**

Community

We provide financial support and share Merck employees' expertise through grant programs that address critical health and social issues in communities where Merck has a presence. Key initiatives include the Neighbor of Choice program, Partnership for Giving (P4G) and Join My Village.

- **Neighbor of Choice program**
- **Partnership for Giving**
- **Join My Village**

MERCK
Be well

HEALTH

As a global healthcare company, Merck believes it has a responsibility to help increase access to medicines, vaccines and quality healthcare worldwide.

In this effort, we are committed to discovering smart, sustainable ways to expand access, especially in parts of the world where there is limited or no healthcare infrastructure and resources. Given the immensity of this challenge, we believe we can make the strongest contribution by working in partnership with others—governments, donors, patient organizations, healthcare professionals, nongovernmental organizations, academic institutions, multilateral organizations and the private sector. Through these partnerships, we provide our expertise, human and financial resources, and products to improve the quality and capacity of global healthcare. Our support helps strengthen training for healthcare providers, health service delivery (including innovative ways to improve care for chronic diseases), patient education and empowerment, and health awareness in communities. We also aim to address underlying barriers to health, such as lack of access to clean water and food.

We share results and best practices from these collaborations, helping advance and add to the knowledge base of the healthcare field. Through our partnership programs, we are discovering better ways to improve human health outcomes in underserved populations.

INITIATIVES

African Comprehensive HIV/AIDS Partnerships (ACHAP)
In 2000, The Merck Company Foundation/Merck and The Bill and Melinda Gates Foundation established the African Comprehensive HIV/AIDS Partnerships to support Botswana's national HIV/AIDS strategy for preventing new HIV infections and reducing morbidity and mortality rates associated with HIV/AIDS. The comprehensive approach includes prevention, treatment, care and support.

African Programme for Onchocerciasis Control (APOC)
APOC was established in 1995 by the World Health Organization (WHO) to control onchocerciasis (river blindness) in Africa using Merck's MECTIZAN® (ivermectin), a broad-spectrum antiparasitic medication that treats and prevents the spread of river blindness. In 2008, Merck committed $25 million over eight years to the World Bank in support of APOC's continued development of country-led river blindness efforts. APOC will operate through 2015 and intends to treat more than 100 million people each year in 19 African countries, working to prevent more than 40,000 cases of river blindness each year and eliminating transmission of the disease where feasible.

The Alliance to Reduce Disparities in Diabetes
With funding from The Merck Company Foundation, Alliance program partners are working to decrease diabetes disparities and enhance the quality of healthcare for underserved adults living with or at risk for diabetes in five communities (Camden, New Jersey; Chicago, Illinois; Dallas, Texas; Memphis, Tennessee; and Wind River Reservation, Wyoming) in the United States.

BroadReach Institute for Training and Education (BRITE)—Management and Leadership Academy
The Merck Company Foundation is supporting implementation of the BRITE Management and Leadership Academy (MLA) in Zambia. The MLA program teaches critical management and leadership skills to healthcare professionals in order to build and strengthen the capacity of local healthcare systems.

China-MSD HIV/AIDS Partnership (CMAP)
This partnership between The Merck Company Foundation and China's Ministry of Health is implementing a comprehensive program to address HIV/AIDS in Sichuan Province, China. CMAP focuses on developing effective approaches for delivering prevention, care, treatment and support services.

HIV Care Collaborative
In the United States alone, there are still 50,000 new HIV infections each year, and one-third of people living with HIV are not in care. To help address remaining barriers to HIV care, The Merck Company Foundation launched a new initiative—HIV Care Collaborative for Underserved Populations in the U.S.—supporting the efforts of local health departments in Atlanta, Georgia; Houston, Texas; and Philadelphia, Pennsylvania, to connect more people living with HIV to the care they need to stay healthy.

Merck Childhood Asthma Network (MCAN)
With funding from The Merck Company Foundation, MCAN supports programs that help increase access to and improve the quality of asthma healthcare for children through evidence-based approaches to asthma management and quality-improvement initiatives. These programs also advocate for and recommend public policy that expedites the implementation, dissemination and sustainability of evidence-based asthma care.

Millennium Villages Community Health Worker Program
Our funding supports implementation of Columbia University Earth Institute's Millennium Villages Community Health Worker Training Program, which helps strengthen community health services by developing a professional cadre of health workers across 14 sites in East and West Africa.

The Merck Vaccine Network—Africa (MVN-A)
With support from The Merck Company Foundation, MVN-A training programs work to improve childhood immunization coverage and strengthen the capacity of vaccination programs in Kenya, Mali, Uganda and Zambia. Through collaborative partnerships, the MVN-A programs provide mid- to high-level immunization-program managers with training in vaccine management and immunization services.

CARE USA—Bridging Health and Education Programs for Children
With support from Merck, CARE USA is continuing its collaboration with Save the Children to serve young children and their families in resource-poor areas through the "5x5 Model," which addresses child development, health, nutrition, child protection and economic empowerment. As part of this three-year initiative, CARE created The Essential Package, which provides a framework and specific tools to address the needs of vulnerable young children from conception through primary school. CARE developed and implemented the first version of The Essential Package, based on a home-based model of services delivery in Africa, in the initiative's first year.

In the second year, CARE completed a community-needs assessment in India and Central America, and adapted The Essential Package to address those needs. For example, formative research in Chhattisgarh, India, revealed obstacles to maternal and child health, such as limited access to hospitals caused by distance or lack of physical infrastructure (e.g., roads and bridges). These findings informed the expansion of The Essential Package to include new materials and additional modes of service delivery suited to India. The project also coordinated with existing maternal health and nutrition programs, as well as with the country's Ministry of Women and Child Development and other partners.

In El Salvador, The Essential Package is being adapted to meet specific community needs, particularly in areas with high levels of poverty, and implemented at five levels: national, community, child care settings, households and individual children. For example, at the community level, Save the Children is working with health workers, volunteers and caregivers to promote healthy early childhood practices, such as handwashing and eating healthy snacks in schools.

The Children's Inn at NIH
Merck provided $3.7 million through a public-private partnership for the initial construction of The Children's Inn on the campus of the National Institute of Health (NIH), the world's premier biomedical research center, in Bethesda, Maryland. The Inn opened in 1990 and, since then, seriously ill children involved in treatment at the NIH have had a place to call home.

Most children who come to the NIH for treatment are facing life-threatening illnesses that resist conventional therapy. Since its opening, The Children's Inn has hosted more than 10,000 children from all over the United States and 82 other countries. The Merck Company Foundation helps cover The Inn's operating costs, and also provided a grant of $3.7 million to build

a 22-room addition to The Inn, completed in 2004, increasing The Inn's capacity to 59 rooms. Merck employees have also generously supported The Inn through personal contributions as part of Merck's Partnership for Giving (P4G) program.

In 2009, The Merck Company Foundation pledged $5 million over five years (2009–2013) to support the establishment of a transitional home adjacent to the NIH campus, called The Woodmont House. This home can accommodate up to five families at a time whose children are no longer in the acute phases of illness yet still require treatment at the NIH Clinical Center. Families stay free of charge and may participate in all of The Inn's activities and programs. To date, The Woodmont House has served 26 families from 11 U.S. states and Puerto Rico, and eight other countries.

EngenderHealth—Mobile Outreach Program
With a three-year (2011–2013) grant from The Merck Company Foundation, EngenderHealth is working to build the capacity of health workers and implement mobile outreach services in order to increase the availability and accessibility of effective family planning and reproductive health services among underserved, rural populations in Ethiopia. This program will help to improve maternal and child health outcomes in 15 remote districts in three regions of Ethiopia: Amhara; Oromia; and the Southern Nations, Nationalities and People's (SNNP) Region. In each region, EngenderHealth will work in close collaboration with Ministry of Health partners to strengthen the capacity of health-program managers and service providers, to introduce and sustain high-quality family planning services through regular outreach at decentralized health facilities that otherwise could not offer these services.

EngenderHealth also will work with selected community-based organizations, in each of the three regions to conduct a series of trainings for 450 community-level health providers and volunteer "health agents." The trainings will equip community health providers and volunteers to provide information on effective family planning through peer-group discussions.

Foundation of the University of Medicine and Dentistry of New Jersey (UMDNJ)—PMTCT Training Program
The François-Xavier Bagnoud (FXB) Center's School of Nursing, at UMDNJ, and the Botswana Ministry of Health, with support from The Merck Company Foundation, are working to build capacity and clinical knowledge among clinician trainers tasked with providing district-level training to healthcare workers in Botswana responsible for scaling up prevention of mother-to-child transmission (PMTCT) of HIV; for infant and young child feeding (IYCF); and for early infant diagnosis (EID) of HIV. These services support the health-related needs of an estimated 42,000 women who deliver each year, with a focus on the approximately 14,000 pregnant or recently delivered women (per year) with HIV and their HIV-exposed infants.

The PMTCT training program aims to:

- Support the development, evaluation and refinement of an effective skills-based training program for 150 clinician trainers
- Ensure that trainers have in-depth knowledge of updated PMTCT and infant feeding guidelines
- Provide trainers and healthcare workers from 650 health facilities with updated PMTCT-, IYCF-, and EID-related job aids
- Create a system of ongoing mentorship and capacity development of trainers—using the FXB Center's "trainings of trainers" model, which helps to improve the long-term effectiveness and sustainability of the training-of-trainers cascade

Through this program, 66 healthcare workers were trained in July and August 2011. Participants from the district of Selibe-Phiwke have since conducted two workshops (in November 2011 and February 2012) that trained approximately 45 healthcare workers.

Save the Children Federation, Inc.
Through a multiyear commitment from Merck, Save the Children will provide more than 20,000 frontline health workers in Pakistan and Nepal with the skills and knowledge they need to deliver more effective maternal, newborn and child health services. It has been shown that when properly trained and supported, community health workers, midwives and health assistants reduced the rates of maternal and infant

mortality caused by preventable and treatable diseases such as pneumonia, malaria, diarrhea, and complications of pregnancy and birth.

In Pakistan, training for more than 13,000 frontline health workers will help to increase access to timely and often lifesaving treatments for more than 3 million children and help provide access to midwifery care for some 40,000 pregnant women. A national effort in Nepal will provide more than 500 instructors at health training institutes with updated curricula and skills training. In addition, Save the Children will provide direct training for more than 6,000 current and new frontline health workers in eight rural districts, preparing them to serve approximately 900,000 children under the age of 5 and approximately 235,000 pregnant women.

United Nations Foundation—Measles Initiative

The Measles Initiative has contributed to saving lives by supporting 80 countries in delivering more than 1 billion doses of measles vaccine. Since 2008, Merck has supported the Measles Initiative with $2.5 million in grants to advance disease surveillance in Africa and India.

Merck International Partnership Program

The Merck International Partnership Program (MIPP) was a three-year (2009–2011) initiative that provided opportunities for the company to build relationships with key stakeholders and address important health and social issues in three geographic regions: Asia Pacific; Central and Eastern Europe, Middle East and Africa; and Latin America.

Merck's Office of Corporate Philanthropy works with these regions on improving the health and well-being of people in emerging and developing markets.

From 2009–2011, MIPP **awarded 53 grants** awards totaling $5.4 million in 27 countries. The funded projects addressed health-related issues such as health literacy, access to healthcare for vulnerable or underserved populations, healthcare inequalities, disease awareness and prevention, and health promotion.

GRANTS

The selected Merck International Partnership Program (MIPP) grants below are listed by region and partnering organization.

** Indicates a multiyear grant.*

Asia Pacific

- **Arogya World (India)***—With support from Merck, Arogya World's Diabetes Awareness and Prevention Education program implemented a wide range of interventions in six middle schools in Delhi, India, including teacher trainings, interactive classroom sessions, and the use of age-appropriate, culturally relevant materials, such as learning games. During the Year 1 intervention, 2,000 students ages 11 to 14 were taught about diabetes and its prevention. A program evaluation compared the knowledge scores of the students' surveyed at the end of Year 1 with those gathered at baseline. The results documented an increase in knowledge about diabetes and itsprevention, including awareness that Type 2 diabetes is preventable and that exercise and healthy eating can prevent diabetes. The evaluation also revealed behavioral changes, including increased in physical activity and healthier food choices.

- **Hyderabad Eye Institute (India)***—A new training program at this institute will prepare 100 to 120 vision technicians to provide primary eye care to underserved populations in remote areas of Andhra Pradesh and Orissa, India. Currently, 83 high school graduates are at various stages of the one-year training course, which provides a basic understanding of the workings of the eye and trains participants to identify common eye diseases and promote eye health awareness. Upon completion of the program, which includes six months of classroom learning and six months of supervised clinical training in eye centers, the newly trained technicians will help combat avoidable blindness by providing the "three Rs"—Refraction; Recognition of common eye diseases and blinding conditions; and appropriate Referral for additional care.

- **Institute for Reproductive Health (Philippines)***—The Muntinlupa Youth Health Development Project is collaborating with high school and university staff to improve youth access to high-quality and youth-friendly health information and services. In collaboration with the Philippine Center for Population and Development, the project completed a baseline survey of public high school students and used the major findings to develop training modules. To date, trainings have been provided to 34 school principals and local leaders; 22 guidance counselors and clinic personnel; 33 science teachers; and 45 student leaders. Key topics included high-risk behaviors such as drinking, smoking, drug use and early sexual activity, as well as other issues affecting youth health, including nutrition, dropping out of school and depression.

- **KN Movement for Good Governance (Philippines)***—By building capacity among 200 local health workers in two villages in the Philippines, a new initiative by the KN Movement for Good Governance will engage the whole community, including local government, in efforts to reduce maternal and infant mortality. Health workers will be trained to understand and communicate the importance of maternal and newborn health and to provide improved referrals to local hospitals. Other elements of the project will include the development of maternity-planning booklets, kits and information campaigns; a new local reporting system and regularly updated database of pregnant women in the two villages; and opportunities for health workers to share best practices.

- **Mahidol University (Thailand)***—Through in-depth interviews, a team of researchers at Mahidol University conducted a qualitative study of 130 patients, women, girls and policymakers to understand more fully the reproductive health needs of Thai women and the barriers they face in accessing healthcare. Upon completion of the study, the researchers developed specific recommendations for needed changes in reproductive health education, prevention, and services delivery. The team is preparing health education sessions in six provinces and forming an advisory board to guide the broader dissemination of its key findings.

- **Philippine NGO Support Program (Philippines)***—This program aims to improve access to health information and services for women, children and families in two underserved communities in La Union, Philippines. During 2011, this program provided health education to more than 30 local officials and 350 village residents, and formalized its relationship with the local government of La Union in order to help its communities to respond to their own health needs in the future.

- **Real Medicine Foundation (India)***—Working to prevent and treat malnutrition among children under five in Madhya Pradesh, India, a Merck-supported program trained 55 local tribal women as community nutrition educators. Together with program staff, the educators went door-to-door across 600 of the villages most affected by childhood malnutrition and identified more than 27,000 children with severe or moderate acute malnutrition. To date, the project has conducted more than 3,800 village-based nutritional information sessions for more than 21,000 people; provided counseling on malnutrition prevention and treatment to more than 94,000 individuals; and referred more than 540 children to the public Nutrition Rehabilitation Centers. The project has documented a 54 percent improvement rate in children under the age of five suffering from moderate acute malnutrition and a 65 percent improvement rate in those suffering from severe acute malnutrition.

- **The Thai Red Cross AIDS Research Centre (Thailand)**—*Thailand Gets Tested*, is a media campaign that encourages regular HIV testing among the general Thai public, is drawing on experts in the areas of HIV/AIDS and public relations to develop effective HIV/AIDS messages and a strategy for disseminating them to the public. The results of a pilot campaign will be used to refine the messages and prepare them for broad-based implementation.

Central and Eastern Europe, Middle East & Africa

- **APOZ (Bulgaria)**—The Association of Cancer Patients and Friends (APOZ), based in Sofia, Bulgaria, is running a national awareness campaign for responsible sexual behavior, U Choose, that uses creative ways to raise awareness and change community norms, such as a slogan competition,

arts-based workshops and social media tools. The campaign—which includes information about contraception, health attitudes, prevention of sexually transmitted infections, and the importance of regular check-ups—stresses personal choice and urges youth to choose wellness over risk of disease. Young people ages 11 to 25 are the primary audience for the campaign, but outreach is also targeting potential partners, school staff, and healthcare professionals, including experts in the field of sexual and reproductive health.

- **Community Health and Information Network (CHAIN) (Uganda)**—To increase health literacy in Uganda, CHAIN, a Uganda-based civil society organization, is collaborating with patient and consumer organizations to implement public awareness campaigns tailored to specific health issues, including cancer, epilepsy and diabetes. In consultation with government agencies, consumer associations, media outlets and community-based organizations, these health literacy campaigns will be carried out at the community level.

- **Health and Development Foundation (Russia)***—To improve reproductive health among youth ages 15 to 17, the Everything That Concerns You program provides education about family planning and the prevention of sexually transmitted infections. In partnership with more than 5,000 teachers, healthcare providers, social workers and psychologists, the program will offer trainings and seminars to 100,000 young people in more than 50 cities throughout the Russian Federation. Capitalizing on the prevalence of mobile phone use among Russian teens, the project will also provide mobile educational content by inviting youth participating in the school-based trainings and workshops to subscribe voluntarily to text-messaging services. Ad-free and content-rich text messages will provide accurate and relevant information about reproductive health and encourage participants to learn more by visiting doctors and counselors, accessing web-based resources, and calling hotline numbers.

- **Hrvatski Savez Dijabetickih Udruga (HSDU) (Croatia)**—Through HSDU, children ages 9 to 16 with diabetes children are able to attend 10-day residential summer camps where they are offered recreational activities, education about the disease, emotional support and an opportunity to connect with other children living with diabetes. A staff of trained medical professionals, including experts in diabetes, a pediatrician, nurses and others work to balance participants' insulin dosages with carefully monitored physical activity and diet. The children participate in specially designed activities that provide them with the information and encouragement they need to manage their health.

- **Human Network International (Madagascar)***—Hundreds of thousands of women of reproductive age in Madagascar are using mobile phones to learn about modern methods of family planning, including information about birth spacing, contraception and how to access local health services. An interactive voice-response information service and SMS, or text, service provide each caller with automated questions that lead to specific, relevant content developed in conjunction with the Madagascar Ministry of Health. Any mobile phone user in Madagascar can use the service free of charge, and to date, more than 540,000 Malagasy have accessed more than 4.7 million minutes of content and requested more than 4.2 million informational texts.

- **Israel AIDS Task Force (Israel)**—Through community outreach and capacity building, an initiative of the Israel AIDS Task Force is promoting awareness, prevention and treatment of HIV/AIDS in Israel's Ethiopian community. The project helps to support and empower Ethiopians living with HIV through group activities, health and nutrition counseling, individual therapy, and the dissemination of printed materials in both Hebrew and Amharic. Media campaigns directed at Ethiopians in their neighborhoods are transmitted via local newspapers, special publications and websites. Community-based institutional and leadership development related to HIV/AIDS outreach, particularly among young people, is designed to strengthen local involvement, increase effectiveness and promote sustainability.

- **Israeli Association for the Study of the Liver (Israel)**—The National Hepatitis C (HCV) Awareness & Education Campaign is providing patients, their families and the general public with information about HCV testing, transmission, complications and prevention. The campaign entails radio advertising, journal articles and other public relations activities; a call center that provides information to the public on HCV; a website that provides downloadable educational tools and

opportunities for users to ask questions of professionals about HCV; and distribution of public information materials through primary care clinics.

- **Lebanese Red Cross (Lebanon)***—The HIV/AIDS Program of the Lebanese Red Cross is a collaboration with 34 youth centers throughout Lebanon to raise awareness about the prevention, transmission and treatment of HIV and AIDS. Each year, peer educator candidates attend specially designed training camps, where they learn strategies for combating both the spread of HIV and discrimination against those living with the disease. Upon completion of the training, educators return to their local communities to help plan and implement awareness-raising activities—anything from theater productions and art competitions to lectures and workshops. Annual recruitment of new members and a train-the-trainer program help to build local capacity and sustainability.

- **Lithuanian Osteoporosis Foundation (Lithuania)***—A campaign run by the Lithuanian Osteoporosis Foundation to educate the Lithuanian public about osteoporosis began with a survey to assess levels of awareness about the disease, common risk factors and strategies for prevention. The findings revealed a general lack of awareness about osteoporosis. In response to the need for public information, the campaign includes the launch of a new website, seminars for volunteers from all ten regions of Lithuania, and the creation of print materials for distribution through the new website and public events. A new phone line is also providing callers with information free of charge, including the locations of nearby diagnostic and treatment centers and the names of local specialists.

- **National Alliance for Local Economic Development (NALED) (Serbia)**—To improve patient care and reduce healthcare costs, the Introducing Telemedicine in Eastern Serbia initiative is connecting urban medical institutions with primary care clinicians in remote, underserved areas of Eastern Serbia. Physicians, nurses and physician assistants in rural clinics are trained to share information such as x-rays and blood work with city hospitals, where collaborating physicians can help analyze tests, speak directly with patients, make recommendations and provide ongoing consultations. Urban physicians with access to superior equipment and subspecialists can use audio, video and other technology to help their rural counterparts with diagnostic, management and treatment decisions for patients who suffer from complex and chronic diseases and, in some cases, to recommend lifesaving treatments for patients in life-threatening emergencies.

- **Renasterea Foundation for Health, Education and Culture (Romania)**—By visiting a mobile diagnostic unit that comes to them, low-income women in underserved regions of Moldavia and Oltenia, Romania, can access safe and free screenings for breast and cervical cancer. Equipped to provide digital mammography, the unit can reproduce exact images and save large amounts of data, allowing mammograms of the same person to be compared from year to year. In order to increase the number of women who take advantage of the free service, a public campaign will seek to raise awareness regarding cervical and breast cancer among more than 100,000 women living in Romania's poorest regions and to encourage them to get regular screenings for both types of cancer.

- **The Association for Chronic Inflammatory Bowel Disease (Slovenia)**—To improve quality of life for patients living with Crohn's disease and ulcerative colitis, together known as inflammatory bowel disease, a project in Slovenia is providing education, resources and support to current and newly diagnosed patients. In addition, the project is raising awareness among those who are in the best position to facilitate the social integration of those suffering from the disease, including employers, teachers, health care professionals and members of the media. Accurate and current information about the disease will be made available to the public through a campaign that will include print materials, web resources and a telephone help line.

- **Worldwide Orphans Foundation (WWO) (Ethiopia)**—With support from Merck, the WWO Academy primary school in Addis Ababa, Ethiopia, provides educational programming, school materials, two meals per day, support services and a summer day-camp program to more than 350 orphans and other vulnerable children, many of whom are affected by HIV/AIDS. In 2011, the school added a fourth grade and enrolled 72 new students. Merck support also

enabled the day camp to provide services to 120 children as well as health screenings to 30,000 individuals, students and community members through a WWO-supported health center. In 2011, the WWO Academy developed mechanisms for evaluating teacher performance, and for assessing the behavior and education of high-needs students, as well as supplemental services to meet those needs, including tutoring and differentiated instruction. An expanded staff now includes two psychologists and two social workers who provide psychosocial support to students in need.

Latin America

- **AC Akeke (Venezuela)***—By using improvisational theater as a tool for reaching adolescents who lack access to health care, a program is providing youth in Caracas, Venezuela, with the tools they need to make informed, responsible and healthy decisions related to sexuality and contraception. This year, 11 educational programs for youth (including one held in the amphitheater of Caracas' largest shopping center) exploded myths and raised awareness about pregnancy and sexually transmitted infections. The program, which seeks to reach youth in accessible and creative ways, already has 5,300 Facebook friends and more than 15,000 Twitter followers.

- **Associacion de Diabeticos de Chile (Chile)***—A project team including a nurse and a nutritionist have visited more than 1,300 patients with diabetes in their homes in Chile, providing them with health screenings, information on how to manage their own care, and ongoing support. The team also gathers information about patients' quality of life and works with patients' families to provide guidance around such issues as adherence to treatment plans and physical activity.

- **Fundación Huésped (Argentina)***—Through the new Latin America Media AIDS Partnership, broadcast media companies and professionals are receiving the training, support and tools they need to help reduce the spread of HIV in Argentina. Content-production assistance and cross-platform campaigns that include social networks and youth-friendly resources are helping to raise awareness, challenge AIDS-related stigma and discrimination, and promote HIV testing. To date, executives, writers and producers in California, Mexico and Bolivia have participated in regional trainings to sensitize media content through script review, access to programming resources and communication with local HIV stakeholders.

- **INMED Brasil (Brazil)***—In the city of Uberlândia, Brasil, the INMED Partnerships for Children initiative is using school- and community-based interventions to help prevent cardiovascular disease among more than 1,700 at-risk children and 6,000 members of their families and communities. A new hands-on curriculum includes lessons on the Heart, Blood Pressure, Cholesterol, Heart Attack, Stroke and Diabetes, as well as information on risk factors, how to identify symptoms of disease, and the importance of nutrition and physical activity. To implement the curriculum effectively, trainings are provided for teachers, school food workers, parents, and school and community health workers. Baseline data collected before the program began and compared with data gathered halfway through the first year documented improvement in height- and weight-for-age ratios in 21 percent of children who were overweight at baseline and in 17 percent of adults who were overweight at baseline.

- **InSTEDD (Argentina)**—In an effort to routinize the administration of childhood immunizations in Argentina, InSTEDD is developing free, open-source, scalable technology to improve service delivery and to help families adhere to vaccination schedules. The technology design, which will enable access through both the internet and mobile devices, will be based on input from a scientific advisory board of public health researchers, policymakers and physicians from both hospitals and community-based pediatric practices.

- **Instituto Vida Nova (Brazil)***—Instituto Vida Nova is providing health and social services for people living with HIV/AIDS in São Paulo, Brazil. Programs include peer counseling, on-site intake, referrals and therapeutic groups. In addition, healthcare professionals are providing needed psycho-social services to patients at home to help them accept their diagnoses, adhere to treatment, and sustain strong relationships with family and caregivers.

- **Mexican Institute of Family and Population Research (Mexico)**—Through interactive, skill-building workshops, 20 health care professionals in Mexico City are developing

proposals to enhance services for or prevention or care of cancer, diabetes, cardiovascular disease, reproductive diseases and HIV/AIDS. The three proposals most likely to improve health outcomes in one of these areas will be selected to receive technical assistance and support to facilitate implementation.

- **Pan American Development Foundation (Colombia)**—Targeting 400 families in the Macarena Region of Colombia, "health brigades" of professionals are improving access to health services and promoting disease prevention through education. During the first year of the project, which provides access to diagnosis, basic medical care and surgery, 1,660 people have obtained access to one or more of these needed health services, and 800 people have received specialized medical care. More than 300 students and 200 teachers have participated in trainings on a range of health topics, including sexuality and healthy relationships. In addition, information has been provided to five health departments for broader dissemination, and 120 children under the age of 5 have participated in preventive care and vaccination sessions.

- **Trustees of Phelps Stokes Fund (Colombia)***—With 52 high school students in the Pacific Coast region of Colombia already enrolled in the Health Leadership Development Initiative in its first year, the program is on track to exceed its target of graduating 72 students by the end of its third year. The goal of the initiative is to equip and encourage participants to matriculate university health science programs and then to return to their communities as practitioners. To develop this pipeline of Afro-Colombian leaders in health care, the program begins with intensive leadership development, including personal vision statements, standardized-test preparation, lessons in Afro-Colombian history, discussions of leadership models, internships, presentations on community health issues and service learning projects.

United States

- **Rx to Fight Hunger***—Merck provides nonprofit organizations with multiyear support to develop, implement and share innovative strategies for combating and preventing hunger and malnutrition. Merck also supports a wide range of local and regional organizations that provide children, seniors and families in need with emergency food and long-term strategies for promoting nutrition and health.

- **Sesame Workshop—"Food for Thought: Eating Well on a Budget"***—Through this multiyear initiative, Sesame Workshop helps families learn how to nurture their children's development through good nutrition, even with limited household resources. With support from The Merck Company Foundation and UnitedHealthcare, Sesame Workshop developed and distributed more than one million Spanish and English Outreach Kits that included "Super Foods," an original video featuring the *Sesame Street* Muppets. Kits were distributed through the National WIC Association, Feeding America, the National Head Start Association and Witnesses to Hunger (Drexel University), as well as through hundreds of local partners in rural, suburban and urban areas, including schools and local food banks.

- With support from Merck, The Field Research Corporation conducted an independent evaluation of the impact of the Food for Thought Outreach Kits. The findings, released in December 2011, revealed that the kits had had a significant, positive effect on families' knowledge, behaviors and attitudes about how to cope with food insecurity and maintain healthy eating habits. Families also were motivated to seek information and support in stretching their food dollars further and in making healthier food choices. As part of the initiative, Sesame Workshop also introduced a new Muppet, Lily, whose family has an ongoing struggle with hunger. By supporting children who experience hunger and by providing their families with strategies for healthier eating on a budget, Food for Thought has contributed to important behavioral changes in children and their families.

- **Drexel University School of Public Health***—With a multi-year grant provided by The Merck Company Foundation, Drexel University School of Public Health supports the Center for Hunger-Free Communities, which uses innovative approaches to treat and prevent child hunger and improve low-income families' access to healthy food. Its work includes Witnesses to Hunger, a research and advocacy project that involves mothers and caregivers of young children who have experienced hunger and poverty. With Merck's support, the

Center developed the Witnesses to Hunger Expansion Toolkit, which helps other communities develop advocacy groups based on this program model.

- During 2011, the Center developed the *Use Your Power* survival guide for low-income mothers, providing direct outreach services for more than 1,200 families in the emergency department of St. Christopher's Hospital in Philadelphia, and continued its partnership with Sesame Workshop's Food for Thought program.

- **University of Kentucky Center for Poverty Research***—Merck is providing funding to the University of Kentucky's Center for Poverty Research for the project "Grandparents, Grandchildren, and Hunger in the U.S.: Assessing Food Insecurity in Multigenerational Households." In 2011, the Center completed the first phase of the project with the release of the report: *A Portrait of Food Insecurity in Multigenerational Households: Part 1*, which documents the determinants and extent of food insecurity among multigenerational households. Findings included a comparison of 2001 and 2009 data that revealed a 23 percent increase in the number of seniors who were "marginally food insecure," a 37 percent increase in those who were "food insecure," and a dramatic increase of 88 percent in the number of seniors who were "very low food secure." Total estimates for 2009 totals included 7.5 million seniors who were marginally food insecure. Continued research will culminate in a final report in 2012.

- **Redwood Empire Food Bank***—Merck provided multiyear support to the Redwood Empire Food Bank for its innovative Simply Supper project, which creates healthy, easy-to-prepare and affordable meals for food banks across the nation. During the first year of the project, more than 90,000 meal kits were distributed, representing more than 359,000 healthy meals. The project has established ongoing relationships with major food banks and food bank networks. This project also has collaborated with Sesame Workshop's Food for Thought initiative, and participates with community centers that provide meals and dietary information to families. During its second year, the project plans to focus on developing and introducing new meals, doubling production and increasing marketing to local food banks.

- **The Community FoodBank of New Jersey**—Merck supports two child-feeding programs through the Community FoodBank of New Jersey. The BackPack program sends home supplemental food with an estimated 2,000 children in Newark, Elizabeth, Irvington, Perth Amboy, New Brunswick, Bloomfield and East Orange who are identified by school staff as chronically food-insecure. The Kids Café program operates 13 sites in Newark, Jersey City, Paterson, Lodi, Morristown, Montclair, New Brunswick and North Plainfield, New Jersey. Kids Café provides warm, nutritious evening meals and lessons in nutrition to an average of 1,500 school-age children each day, as well as training for program staff in safe food handling and food storage during after school programs.

- **America's Grow-A-Row**—Merck supports America's Grow-a-Row in its volunteer-based efforts to plant, pick, rescue and deliver fresh produce to people in need. To date, the organization has distributed more than one million pounds of farm-fresh produce, thanks to the efforts of its more than 1,000 volunteers. This year, the organization launched the Newark Hunger Relief and Healthy Eating Pilot Program, familiarizing inner-city children with farming and healthy eating. The program also educates people of all generations about matters related to hunger and ways they can help in their own communities.

- **Meals on Wheels Association of America**—Merck provided support to the Meals on Wheels Association of America to launch a television series that draws attention to the issue of hunger among senior citizens. Targeting Americans ages 50 and over, the program, *Good Food, Good Deeds*, addresses the issue of senior hunger, airs cooking demonstrations of nutritious meals seniors can prepare at home and provides information on available services. The series also gives viewers the opportunity to play a role in giving back to other seniors in their communities. The pilot series, of which The Merck Foundation was the premier national sponsor, generated nearly three million media impressions through a wide range of outlets, including the *Today* show, MSNBC.com, *TV Guide* and many others.

EDUCATION

Fostering the next generation of scientific leaders is a key part of Merck's overall commitment to science.

It is essential for the sustainability of our business to have access to the best-trained scientific minds around the globe and these relationships are essential for the economic development and well-being of the communities in which we operate.

WORKING TO IMPROVE HEALTH LITERACY

Since 2009, MSD Germany has been working with representatives from patient organizations and senior spokespersons to make patient information leaflets easier to read and understand. As a result of this initiative, more than 25 leaflets for different indications have already been reviewed. In November 2011, the German patient commissioner expressed his appreciation for the improvement of the patient prescription leaflets and acknowledged that the improved leaflets have had positive effects on health literacy, patient safety and compliance.

Merck has a long history of promoting science education at the precollege, undergraduate, graduate and postdoctoral levels, and we have provided long-term support for programs that expand training capacity in the biomedical and health sciences.

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Merck's philanthropy in general education is designed to increase the opportunity for academic success and close the achievement gap between low-income students and their middle- to high-income peers. Our support continues through public-private partnerships with local, regional and national organizations, with a focus on evidence-based approaches to learning and rigorous evaluation.

Priority is given to organizations that offer educational opportunities and promote academic achievement anywhere from early-childhood to postsecondary education.

MISE

The Merck Institute for Science Education (MISE) was established in 1993 as a nonprofit organization dedicated to improving K–12 science education through teacher and program development.

MISE collaborates with teachers, school administrators, parents, Merck employees and higher-education institutions to improve science education in the classroom and to build consensus around the urgency for reform. The Merck Company Foundation has provided more than $50 million to support MISE since its inception. MISE has become a model for how corporations can support the nation's STEM (science, technology, engineering, mathematics) education objectives and make a lasting difference in education reform by focusing on the specific goals of:

- Developing and delivering research-based professional-development opportunities to enhance teachers' knowledge and skills
- Providing access to high-quality curriculum materials and resources
- Building communities within schools that are committed to strengthening science teaching and learning within and across schools and school districts
- Promoting local, state and national policies that support effective science education

The work is guided by a vision of science classrooms in which inquiry is an integral and regular part of the learning experience of all students. Inquiry-based teaching and learning imitates the thinking and methods of scientists and helps students explore and understand the natural world. The MISE approach to instructional reform rests on the premise that when students are engaged in legitimate inquiry, they develop a greater interest in and deeper understanding of science than is possible through more conventional instructional approaches.

MISE also takes a long-term, systemic approach to science education reform, which focuses primarily on professional development to enhance the knowledge and skills of educators. MISE works in partnership with the New Jersey school districts of Elizabeth, Hillside, Linden, Newark, Rahway and Readington Township, and the Pennsylvania district of North Penn. Newark, New Jersey's's largest school district became the newest MISE partner in 2010.

In addition to funding provided by The Merck Company Foundation, MISE has received funding from the National Science Foundation, including $7.1 million in 2003 for MISE and a regional partnership of schools and education organizations to strengthen science and mathematics education in New Jersey's Elizabeth, Hillside, Linden and Rahway school districts.

MISE has had a significant impact on the character of teaching and learning science in its partner school districts, according to research performed over a 15-year period, first by the Consortium for Policy Research in Education (CPRE) and subsequently by Horizon Research, Incorporated (HRI).

The reports from HRI, which were focused solely on the work of MISE in middle school mathematics and the science classrooms of four New Jersey districts, found that the professional development provided by MISE had an effect on teachers' instructional strategies, the ability to diagnose student thinking, and the use of formative assessment strategies. Additionally, the professional development strengthened classroom culture and increased focus on content and the use of questioning to stimulate student thinking.

The external analyses also show that MISE is helping to:

- Elevate science as a priority in partnership schools and districts
- Support rigorous, inquiry-based teaching in partnership classrooms
- Support research-based adoption of instructional materials
- Improve hiring and recruitment practices that put more emphasis on teachers' knowledge about content and instructional strategies
- Inform administrators of characteristics of high-performing classrooms
- Develop new, district-wide science assessments

Most importantly, MISE has achieved results in the classroom. Analysis of student performance on standardized tests by CPRE found that students receiving science instruction from teachers who participated in MISE professional development over several years outperformed students whose teachers had had only one or no years of MISE training. The differences were statistically significant when comparing the students of teachers with more than three years of MISE professional development with students of teachers with less than three years of MISE professional development.

Additionally, analyses of student achievement data across all four New Jersey districts on the state's Grade Eight Proficiency Assessment found that the race/ethnicity achievement gap is significantly smaller in science for students of teachers who participated in in-class support coaching than for students whose teachers did not participate in coaching. MISE provides academic content and pedagogical support for coaches.

For more information, visit **MISE.org**.

PERFORMANCE & COMMITMENTS

MISE SUMMARY	2008	2009	2010	2011
Merck investment in MISE (US$M)[1]	3.9	2.8	3.3	3.5
Student enrollment (NJ and PA MISE-supported school districts)	35,210	49,294	88,692	89,576
Time spent teaching science at the elementary school level (minutes/week)	NR	121	149	159
Teachers and principals attending workshops, including the Academy for Leadership in Science Instruction	686	708	678	702
Participants satisfied with the quality of professional development workshops	97%	96%	95%	97%
Principals reporting being prepared to support teachers implementing the NJ Core Curriculum Content Standards in Science (four NJ school districts; grades 6, 7 and 8)[2]	100%	89%	86%	NR
Grade 8 State Science Test results: Percent proficient (NJ school districts)	55%	61%	63%	73%
Grade 4 State Science Test Results: Percent proficient (NJ school districts)	NR	80%	80%	84%

[1] 2009 and 2010 data adjusted from previously reporting data for accuracy.

[2] This data is reported only every three years.

NR: Data not reported.

PUBLIC POLICY

While MISE concentrates its efforts in local school districts in New Jersey and Pennsylvania, it seeks to have a broader impact on state and national education reform through its public policy and stakeholder efforts.

State Level

- Members of the MISE team played a leadership role in the revision of the New Jersey Core Curriculum Content Standards in Science
- MISE contributed to the development of New Jersey's statewide Mathematics and Science Coalition, made up of educators, policymakers, representatives from business and parents

National Level

In 2010, President Obama recognized MISE as a model science-education initiative when he announced his "Educate to Innovate" campaign, which was designed to strengthen science, technology, engineering and math (STEM) education over the next decade. The president highlighted MISE's work and cited the significant expertise and resources that MISE has brought to the task of improving science education.

UNCF/MERCK SCIENCE INITIATIVE

African Americans currently hold fewer than 3.2 percent of PhDs in biological sciences and chemistry. To help address this imbalance, Merck joined with the United Negro College Fund (UNCF) in 1995 to establish the UNCF/Merck Science Initiative.

This groundbreaking program seeks to expand the pool of world-class African American biomedical scientists and, in so doing, to enhance economic competitiveness in the United States. Each year, the UNCF/Merck Science Initiative provides scholarship and fellowship support to 37 outstanding African American students who are pursuing studies and careers in the biological and chemical sciences.

Awardees are selected through a national competition open to all eligible students at colleges and universities throughout the United States. The awards provide financial support, hands-on training, mentoring relationships and institutional support to help the UNCF/Merck Fellows devote their attention to education. Undergraduate scholars also receive paid internships for two summers at Merck Research Laboratories, where Merck scientists volunteer to mentor all Fellows.

The **UNCF/Merck Science Initiative** was launched with a $20 million grant from The Merck Company Foundation. In 2005, the Foundation renewed its commitment to UNCF with a five-year, $13 million grant, and in 2011, it pledged another $14 million to UNCF over five years. The initiative provides Merck with an opportunity to recruit from a more diverse pool of postdoctoral fellows in support of the company's **diversity workforce goals** and to support one of our three **giving priorities**.

Merck itself has provided $3 million to support a summer internship program for undergraduate Fellows since 1995.

For this program, Merck is responsible for funding stewardship; program administration; Fellow selection by three committees of Merck scientists; mentor selection and training; implementation of the summer internships for undergraduates; funding and implementation of Fellows Day; and program assessment.

Mentoring is a key program component, with mentors sharing their expertise, and with career advisers and colleagues helping to ensure that the Fellows move seamlessly from one educational level to the next. Merck scientists also benefit from their experience as mentors, with many remaining in contact with Fellows after the fellowship is completed.

UNCF is responsible for developing and maintaining content for the online program application; disseminating the application to all four-year colleges and universities; managing the application process; and program assessment. Once selections are made, the UNCF notifies awardees and manages all aspects of award confirmation and distribution. The UNCF is the frontline manager of the relationship with the Fellows.

The program also brings all current awardees together annually for three days of scientific symposiums and poster sessions, as well as activities centered on relationship building and networking with one another and with scientists at Merck.

UNCF/Merck Science Initiative awards are made at the undergraduate, graduate and postdoctoral levels, and administered by UNCF. The Initiative is aimed at key transition points in education: undergraduate students entering their final academic year; graduate students who are midway through their dissertation research; and postgraduate students entering their postdoctoral training.

PERFORMANCE & COMMITMENTS

Merck has committed more than $45 million through 2016 to the Science Initiative. To date, more than 550 recipients—58 percent of whom are women—at more than 170 institutions have received fellowships.

MERCK INVESTMENT IN UNCF	1996–2010
Merck Company Foundation/Merck investment in UNCF/Merck Science Initiative*	$36mm
Degree Completion Rates of Fellows	
Undergraduate (BA/BS)	100%
PhD	99%
Former undergraduate Fellows who entered graduate school	92%
Former graduate Fellows who entered post-doctoral positions	62%
Employment Outcomes of Graduate Fellows (PhDs)	
Academic	40%
Business/Industry	41%
Public Sector	19%
Number of Fellows hired by Merck (2002-2010)	24
*Represents total funding commitment (1996-2010)	

EDUCATIONAL DISPARITIES

The Alliance/Merck Ciencia Hispanic Scholars Program, in partnership with the National Alliance for Hispanic Health, is designed to increase Hispanic students' access to undergraduate degrees in fields related to science, technology, engineering and mathematics (STEM).

The program provides annual college scholarships and three paid 10-week summer internships (between years of undergraduate enrollment). The program was launched in 2008 with a $4 million commitment from The Merck Company Foundation over five years.

Hispanic high school seniors who reside in Brownsville, Texas; Elizabeth, New Jersey; or Los Angeles, California; and who will pursue a college degree in a STEM field are eligible for a $42,500 award ($20,000 in scholarship funding and up to $22,500 in internship support). Scholars also receive a mentorship with an Alliance Ciencia liaison and participate in an annual Ciencia Scholars symposium where they present their research, attend lectures by professional scientists, and participate in workshops designed specifically for them in a variety of subject areas.

The National Scholarship Program offers 25 one-year, $2,000 scholarships to Hispanic students pursuing STEM degrees each year.

To find out more about the National Alliance for Hispanic Health, **click here**.

UNDERGRADUATE

Since 1994, the Merck/AAAS Undergraduate Science Research Program (USRP) has awarded grants to support undergraduate interdisciplinary research in the sciences.

The Merck Company Foundation contributed more than $11.5 million over the life of this program, which ended in 2011.

The partnership between Merck and the American Association for the Advancement of Science (Merck/AAAS) pioneered grant programs focused on interdisciplinary collaboration in biology and chemistry at primarily undergraduate institutions. The USRP grants were awarded to more than 200 colleges and universities and supported over 2,000 undergraduates, providing them with the opportunity to work with and learn from faculty in the laboratory and engage in basic research.

In 2011, 60 Merck Scholars were supported by the grant. Approximately 10 percent of these Merck Scholars identified their summer research experience as a transformative event, causing them to redirect their course of study or to consider graduate school. A majority of the scholars reported that the research experience confirmed their interest in the sciences and increased their confidence in the laboratory. Eighty percent of Merck Scholars reported that the research experience exceeded their expectations, with the remaining 20 percent reporting that the program met their expectations.

New grant funding at USRP colleges and universities resulted from the work supported by the Merck/AAAS USRP. For 2011, new grants of $2.1 million were generated $1.88 million in grants were pending review. Additionally, two USRP schools developed a collaboration that resulted in a $600,000 grant application to the National Science Foundation.

Teacher Professional Development

In 2011, The Merck Company Foundation awarded a three-year (2011–2013), $900,000 grant to the University of Colorado Foundation to support a transformative professional development program for teachers—Xsci Extraordinary Educator Experiences—through experiential learning.

The Foundation's grant will support two cohorts of urban, K–12 educators—one group from Colorado and the other from Michigan—to partake in the Xsci Africa Science Learning Journey. On their journey, the teachers will climb Mount Kilimanjaro, experience the wilds of the Serengeti, and explore some of the health and development challenges in Tanzania. The teachers will each make their own personal documentary videos of the experience as both a rich data source and a powerful tool for teaching science to their students.

The first cohort of teachers will take the XSci Africa Science Learning Journey in the summer of 2013. For more information, **click here**.

CHILDHOOD EDUCATION

Merck's philanthropy in general education is designed to increase opportunities for academic success and close the achievement gap between low-income students and their middle- to high-income peers.

Within general education, priority is given to institutions and organizations that offer educational opportunities and promote academic achievement in one or more of the following areas:

- Providing early learning opportunities and promoting literacy-rich environments
- Creating clear pathways to college and improving college success
- Improving individuals' health literacy and strengthening the link between health outcomes and success in school

Programs focus on multiple points in the education pipeline—from early childhood to postsecondary education. Key programs that Merck and The Merck Company Foundation support in this area include:

Reach Out and Read—This program prepares America's youngest children—especially those growing up in poverty—to succeed in school by partnering with doctors to prescribe reading books and encourage families to read together. The program recruits pediatricians and nurse practitioners to make literacy a standard part of well-child visits for children ages six months through five years. Physicians distribute new books to children at each visit and advise parents on the importance of reading aloud to their children. They also provide parents with literacy strategies for each developmental stage. In 2011, 30 Merck employee volunteers helped model good literacy practices by reading aloud to children in "literacy-rich" waiting rooms.

Sesame Workshop Education and Outreach Programs in China—Sesame Workshop, the nonprofit organization behind *Zhima Jie* (*Sesame Street*) in China, is responsible for a number of educational initiatives in China.

In 2011, it launched the TV series *Big Bird Looks at the World*, which aims to foster children's natural curiosity about their world and science and to promote "hands-on" exploration as a way of learning. By encouraging children to ask questions and explore those questions with age-appropriate experiments, this approach to science offers an alternative to China's traditional didactic, memorization-based instruction, and should improve critical thinking and problem-solving skills. To date, the TV series has reached at least 17 million preschoolers (children between the ages of 4 and 6) and 30 million of their mothers in China.

In addition, Sesame Workshop will create Kindergarten Reading Corners in 125 schools in rural China, aiming to improve the educational outcomes of children living in rural provinces.

Sesame Workshop also launched a two-phase *Zhima Jie* educational community, a multimedia outreach project on emergency response and preparedness to help children and families cope in the aftermath of disasters as well as prepare for future potential emergencies. More than 115,000 children have been reached with these educational and outreach materials.

Liberty Science Center's Young Learner Lab—National science leaders note that young children need opportunities to explore science by participating in enriching programs that help develop literacy skills. The Young Learner Lab sessions at the Liberty Science Center in Jersey City, New Jersey, designed for children between the ages of 3 and 8, provide developmentally appropriate learning sessions on such topics as elementary geology, simple machines, local flora and fauna, engineering, and architecture. Through Young Learner Lab sessions, children can develop early theories about scientific concepts that may stimulate their imaginative talk and play. Over time, children are able to reflect on their theories by evaluating evidence and constructing new theories.

Teach for America—This well-known program is recruiting highly qualified K–12 mathematics and science teachers to work in public schools in Newark, Paterson and Elizabeth, New

Jersey. In the 2010–2011 school year, Teach for America placed 46 new corps members, who joined 40 second-year corps members, as teachers in 37 of the districts' most underserved and underperforming, schools, through which they reached more than 5,000 students. Of the 86 teachers (corps members), 34 were math and science teachers, representing a 5 percent increase from the previous year. For the coming school year, Teach for America experienced a 50 percent increase in demand for teachers in the Newark public schools and expanded its placement to Orange, New Jersey, public schools. The anticipated placement of 130 corps members is likely to reach 8,000 students.

Rutgers Future Scholars Program—This program is designed to address the critical educational needs of promising but underserved students in New Jersey, by identifying at-risk, low-income and first-generation students before they enter the eighth grade. Mentors work with these students from eighth grade through high school as positive role models. The program also offers college-level developmental courses to prepare the students for college. Should the students qualify and elect to attend Rutgers University, they receive a four-year, tuition-free education.

In June 2011, the third cohort of students from New Brunswick, Piscataway, Newark and Camden public schools entered the Rutgers Future Scholars (RFS) program, which to date, has supported 600 students.

Selected 2011 Outcomes:

- The middle school and high school dropout rate of students participating in the RFS program was zero percent, compared with up to a 45 percent average dropout rate within the same school district
- Average high school grade point average was 3.19 on a 4.0 scale for RFS students, with some currently ranked in the top of their class
- Over 50 percent of 11th grade RFS students (class of 2017) were taking advanced/honors courses
- Twenty nine percent of 11th grade RFS students (class of 2017) were taking at least one Advanced Placement course, which may earn them college credit, compared with the state average of 20 percent
- All active 11th grade RFS students (class of 2017) have earned college credit, compared with a 5 percent rate of high school students nationally who take college courses while in high school

W.E.B. DuBois Scholars Institute—Founded in 1988, the W.E.B. DuBois Scholars Institute is a "bridge" program designed to develop a cadre of young people committed to inspiring hope and vision in needy communities and eliminating poverty and racism in U.S. society. The 2011 Institute consisted of 18 middle school students (pre-scholars) and 33 high school students (scholars) from locations across the U.S., including: Atlanta, Chicago, Los Angeles, New York City, Alaska, Maine, Maryland, Massachusetts, New Jersey, Pennsylvania, Texas and Virginia. A grant from The Merck Company Foundation supported the tuition, board and related expenses for 25 students from Newark, New Jersey, public schools to participate in the Institute.

MERCK
Be well

COMMUNITY

At Merck, we aspire to having a positive effect on the communities in which we operate worldwide, and we recognize our responsibility toward those who are affected—either directly or indirectly—by our operations and activities.

Our community involvement reflects the priorities that Merck shares with local, national or regional stakeholders. We provide financial support and share the expertise of Merck employees through programs that focus on solving critical health and social issues in communities where Merck has a presence.

In a variety of ways, Merck's philanthropic and employee volunteer programs address local community needs, support environmental stewardship, respond in times of emergency, and enable our employees to contribute to the well-being of their communities.

Community giving is managed jointly by the Office of Corporate Philanthropy and regional and local management, supported by regional and local committees engaged with community stakeholders in identifying relevant community needs.

Learn more about our economic impact on communities.

PERFORMANCE & COMMITMENTS

COMMUNITY GIVING SUMMARY (US$)	2009	2010	2011
Contributions to community programs			
Art	239,000	187,000	113,000
Civic	116,000	59,000	103,000
Education	293,000	462,000	614,000
Environment	228,000	52,000	158,000
Human Health Services	1,516,000	1,843,000	1,677,000
Partnership For Giving			
Art	673,000	774,000	980,000
Education	3,648,000	3,449,000	4,261,000
Human Health Services	5,754,000	4,383,000	7,902,000
TOTAL			

NEIGHBOR OF CHOICE

Our Neighbor of Choice program supports the work of local nonprofit organizations that strive to improve the quality of life in communities where Merck has a presence.

Established by Merck in the 1990s, the Neighbor of Choice program helps to build relationships of trust and support with local nonprofit organizations and residents of the communities in which we operate by responding to needs identified by the community itself. Merck takes seriously the shared responsibility of helping to improve the quality of life of neighbors in need.

In 2011, Merck invited nonprofit organizations located in 24 communities in which Merck has a major presence to apply for support. In accordance with the Neighbor of Choice program guidelines, a total of $2.7 million in grants were awarded to 112 nonprofits in support of a wide range of health, social service, educational, civic, arts/cultural and environmental initiatives.

In early 2012, Merck refined the program guidelines to more closely reflect the needs of local communities. The program now prioritizes support for organizations located in close proximity to Merck sites and offers two types of funding:

- Grants of up to $50,000 can be awarded to support programs that promote the health and well-being of community residents in alignment with the mission and priorities of The Merck Company Foundation and the Office of Corporate Philanthropy
- Grants of up to $25,000 can be awarded to local nonprofit organizations that serve a wider range of community needs, including through arts, environmental and educational programs

The Neighbor of Choice program has one annual application cycle for each global region.

In 2011, the Neighbor of Choice programs supported organizations in the U.S. and around the world. Below are examples of this funding.

United States

In Memphis, Tennessee, a grant to the Brinkley Heights Urban Academy supported the Infusionomics program, which improves the economic prospects of at-risk urban youth from low-income communities by increasing students' financial literacy and teaching them entrepreneurship skills. Students launched school-based businesses and engaged in hands-on, personal-money management through a mini-economy that trained them in such critical skills as budgeting, saving, investing and credit management.

In Lewisburg, Pennsylvania, Neighbor of Choice supported the Evangelical Community Hospital in providing free mammograms and breast-cancer-screening education for 120 uninsured and underinsured women living in Susquehanna Valley.

In San Juan, Puerto Rico, 55 students created an educational newscast in which they reveal the problems they faced related to drug trafficking and drug abuse in their schools and communities. Their broadcast reached more than 1,600 students, staff and families, and the project was shown to have had a positive effect on participating students' attitudes toward drugs.

With support from Merck, the Adjustment to Vision Loss Project of the New Jersey–based organization Heightened Independence and Progress provided direct assistance to individuals with vision loss by facilitating the development and maintenance of an extensive network of peer-support groups in the 14 counties of northern and central New Jersey.

The Neighbor of Choice program provided support to the Community FoodBank of New Jersey's Kids Cafe and BackPack programs. With support from Merck, these programs together provided more than 3,000 low-income, school-age children with healthy meals and backpacks containing supplemental weekend food for their families.

Through the Domestic Violence Legal Representation Program, New Jersey–based Partners for Women and Justice provides legal assistance to low-income victims of domestic violence seeking restraining orders, safe visitation and custody arrangements, and financial support. Representation is provided by a highly trained staff attorney funded by the Neighbor of Choice program.

Neighbor of Choice support for the Hudson Perinatal Consortium in Jersey City, New Jersey, enabled expansion of its Community Doulas program, which trains women in the local community to become doulas and to care for at-risk expecting women. The doulas' work has led to better birth outcomes, including reducing the incidence of preterm labor, increasing birth weights and promoting breastfeeding.

With funding from the Neighbor of Choice program, the Circle of Life Children's Center Pediatric Palliative Care/Clinical Services Program was able to recruit a bilingual pediatric social worker who provides direct clinical services to seriously ill children and their families.

Funding for Earth Korps Inc. helped with the removal and recycling of pollution accomplished through the Shenandoah River Clean-Up Project. Since May 2010, with support from Merck and other sponsors, Earth Korps has removed nearly 50,000 lbs. of garbage (and counting) from the Shenandoah River.

International

In Italy, Merck's Neighbor of Choice supported the Soccorso Clown program at the Bambino Gesù Hospital, in Rome, which uses specially trained professional entertainers to reduce stress and fear among child patients. Regular visits by the clowns have reduced the need for pain medication among hospitalized children, facilitated the work of the hospital staff and filled the halls with laughter.

In Drammen, Norway, a grant to Papirbredden Innovasjon allowed that organization to partner with its local library to develop and distribute equipment for elderly clients living at home. The program provided the elderly with computer games that stimulate cognitive and motor skills, slow the onset of dementia and increase well-being.

Support from Neighbor of Choice for the Circuit Entrepreneur of Oeiras program in Carnaxide, Portugal, provided training in entrepreneurship to 20 women living in poverty who also had been the victims of violence. Eight of these women were further supported in starting their own businesses.

In the community of Haar, Germany, the Starke Eltern—Starke Kinder® (Strong Parents, Strong Children) program provides education about maternal and child well-being to young families and families who have emigrated from other countries. With support from Merck and local volunteers, families of newborns and those with children under the age of 1 receive a "Welcome to Life" package; outreach; and counseling as well as a chance to participate in workshops on such topics as parenting skills, play-based language learning for toddlers, and German language and literacy courses (for mothers from other countries).

Giving Totals

Amount contributed to Neighbor of Choice programs (US$M)[1]	2.7
Number of grants through the Neighbor of Choice program	112

[1] For 2011, data includes funding contributed through Merck's Office of Corporate Philanthropy and The Merck Company Foundation. Additional funding is provided through local U.S. sites and Merck sites outside the United States that we do not track centrally.

EMPLOYEE GIVING

Around the world, Merck employees are actively engaged in their communities.

Employee giving benefits employees, their communities and Merck. For this reason, there are a number of programs through which employees can contribute to the communities in which they work and live.

To strengthen our culture of volunteerism, we established a Global Employee Volunteerism Policy, through which eligible Merck employees currently may receive up to 20 paid work hours per calendar year to volunteer. Since the policy's implementation in 2009, more than 20,000 employees have completed approximately 210,000 hours of volunteer work.

365 Merck Days

Merck employees around the world are involved in volunteer efforts that improve their communities and enhance their neighbors' well-being. In February 2010, we introduced the 365 Merck Days program to foster that giving spirit. This global volunteer program supports the efforts of our employees, by providing volunteer release time (time to volunteer during work hours) and a website with information on how employees can become involved. The site also enables employees to share their experiences, through videos and photos, with colleagues anywhere in the world.

Merck has numerous volunteer programs in place around the world that address a variety of societal challenges. Here is a sample of those programs:

Merck Community Action Day (Canada): Almost 90 Merck Canada employees volunteered for the first Merck Community Action Day in 2011, supporting 16 nonprofit organizations in Montreal and the West Island. Employees sorted food, accompanied people for shopping, served meals and cleaned apartments. The Merck Community Action Day is a new initiative, and Merck is considering extending it across Canada, for employees in all provinces.

Water Watch Society in Singapore: In collaboration with Water Watch Society, Merck's Singapore employees embarked on a clean-up of the Marina Barrage, a desalinated reservoir made up of Marina Bay and the Kallang River Basin that provides 10 percent of Singapore's water needs. Volunteers rode bicycles, circled the reservoir in patrol boats, and walked along the river beds collecting litter and noting any sites that needed professional cleaning.

Build Smart, Breathe Easier (USA): Merck volunteers kicked off the Build Smart, Breathe Easier program on June 8, 2011, building one of four asthma-healthy homes with the help of Habitat for Humanity. In a program that will continue through December 2012, hundreds of Merck volunteers worked on these houses in Philadelphia, Detroit, Atlanta, and Los Angeles. Build Smart, Breathe Easier is a national asthma-education program sponsored by Merck in partnership with the Asthma and Allergy Foundation of America, Habitat for Humanity and HGTV personality Carter Oosterhouse. It's designed to highlight the importance of maintaining an asthma-healthy home and to disseminate information on ways to help manage the disease.

MSD Switzerland & MSD EEMEA: More than 200 employees from the MSD sites in Switzerland and in the the EEMEA region (Eastern Europe, Middle East and Africa) participated in the Lucerne Marathon on October 30, 2011, to raise funds for two charities and enjoy a sporting event among friends within the company. MSD in Switzerland and in the EEMEA region agreed to donate money for every kilometer run by the MSD team to both the Chronic Disease Clinic of the St. Francis Designated District Hospital in Ifakara, Tanzania, and the "Kinder Jugend Familie" (child adult family) institute in Lucerne, Switzerland.

Team Volunteering (USA): Merck teams from Sales, Marketing, Finance, Research Manufacturing, Information Technology, Global Support Services, Legal and many other

divisions and departments supported countless nonprofits and nongovernment organizations around the world. For example, members of the Global Franchise Planning & Support Group, USA, participated in a volunteer event with Junior Achievement and the St. Francis de Sales School in Philadelphia, Pennsylvania. Junior Achievement is one of the largest U.S. organizations dedicated to empowering young people to own their economic futures by emphasizing the relevancy of education. After some training and other preparation, volunteers served as role models in classrooms (grades 2–5) of approximately 200 students. The group used curricula designed to help prepare the students for their roles as individuals, workers and consumers. Merck employees agreed that they were personally touched by the experience, and the teachers and students expressed their great appreciation for the volunteers.

Pro Bono Legal Program: In this nationally recognized program, which began modestly in 1994, more than 100 Merck attorneys, paralegals and administrative associates provide pro bono legal services to residents of New Jersey and Pennsylvania who could not otherwise afford legal representation. Merck is currently handling pro bono cases with legal service partners throughout New Jersey and in southeast Pennsylvania in the areas of guardianship, landlord/tenant disputes, bankruptcy, family law, domestic violence, military veteran benefits, social security disability benefits and special education law. By the end of 2011, Merck's Pro Bono Legal Program was supported by 172 participants who provided approximately 3,700 hours of pro bono legal services for the year.

Join My Village: Introduced to Merck employees in January 2011, **Join My Village** is a "click-to-commit" social change initiative through which Merck employees can make charitable donations to help provide education and economic development opportunities for women and girls in Malawi, and, as of February 2012, in India as well. Merck is partnering with General Mills to donate $1. 5 million in 2012 to CARE—a leading humanitarian organization fighting global poverty through which Join My Village donations are made. To learn more about Join My Village, you can also visit their **Facebook page**.

Partnership for Giving (P4G): The Merck Partnership for Giving (P4G) is our year-round matching funds program that gives active U.S. and Puerto Rico–based Merck employees and retirees the opportunity to support health and human services agencies, accredited educational institutions, arts and culture, and animal welfare and environmental organizations of their choice. The Merck Company Foundation matches employee and retiree contributions of up to $30,000 a year.

Touched by an Agency: To recognize and thank the many people and organizations that have made a difference in our own lives and the lives of our families, U.S.-based employees are invited each year to nominate nonprofit agencies to receive a $1,000 "thank you grant" through the Merck P4G program. Employees share their personal stories with these agencies on the P4G website.

Merck/MSD Blood Drives: Merck runs blood drives at many of its sites around the world. In 2011, 65 employees in Egypt, for example, participated in a companywide blood drive.

PERFORMANCE & COMMITMENTS

EMPLOYEE GIVING SUMMARY	2008	2009	2010	2011
Employees who volunteered on release time (including pro bono)	NA	NA	NA	7,900
Volunteer hours (VHs)	NA	NA	NA	213,000
Release time hours (RTHs)1	NA	NA	NA	130,900
Ratio of RTH/VH	NA	NA	NA	61%
Partnership for Giving (P4G)				
Total contribution (US$M)2	25	22	21	27
Number of organizations that benefited	7,048	6,777	7,406	10,037
Number of Merck employees who gave	12,289	11,222	14,112	16,208
Touched by an Agency grants	15	15	15	18

[1] Estimated based on an assumed increase in use of the global policy from 2009_2011.
[2] Contributions in 2011 through P4G included direct giving, donations through payroll deductions, Dollars for Doers, and matching gifts from Merck. Merck has remained committed to its major U.S.-based giving programs, as shown by the increase in the number of organizations that benefited from the P4G as well as the increase in the number of employees and retirees who participated in P4G.
NA: Not available.

RICHARD T. CLARK FELLOWSHIP

A global program that leverages the skills and talents of Merck and MSD employees to build and support humanitarian organizations' efforts to answer the health needs of the underserved.

In recognition of retired Chairman and CEO Dick Clark, and his philosophy of "Passion, Purpose and Commitment to Corporate Responsibility," Merck's Office of Corporate Philanthropy created the Richard T. Clark Fellowship. This global program leverages the skills and talents of Merck and MSD employees to build and support humanitarian organizations' efforts to answer the health needs of the underserved.

"What really excites me is the chance the Fellowship gives employees to apply their dedication, skills and abilities to put Merck's mission into action. Working with humanitarian organizations around the world in this way allows us to have a truly unique effect on people's lives and better understand the future of health care."

Richard Clark
Retired Chairman & CEO

While providing unique career development opportunities that help expand employees' understanding of critical needs in different parts of the world, the program works to improve health literacy, increase access to health services and products, enhance access to health education and improve health outcomes.

The Richard T. Clark Fellowship is one more way the company is demonstrating its commitment to saving and improving lives.

RTC PARTNERS

Initial Fellowship Partner—PSI

PSI is a global non-profit organization dedicated to improving the health of people in the developing world by focusing on serious challenges like a lack of family planning, HIV/AIDS, maternal health, and the greatest threats to children under five, including malaria, diarrhea, pneumonia and malnutrition. PSI has operations throughout Asia, Africa and Latin America and has more than 16,000 franchises delivering services to 6.4 million clients.

Our Merck Fellows will work to establish standards and procedures in areas such as brand management, field support and supervision, finance mechanisms and mobile health technologies that will be used by PSI to improve the quality and scalability of their country operations. The team's recommendations will be piloted in several countries and ultimately implemented in PSI locations throughout the world.

Our work with PSI represents the kick-off of the Richard T. Clark (RTC) Fellowship program. We plan to have two cycles of Fellowship opportunities each year—one that commences in April/May and a second cycle in August/September—and we are currently engaged in conversations with a number of nonprofit organizations to identify the Fellowship opportunities for the second half of the year.

"The Richard T. Clark Fellowship program represents the best of what is possible in private-public partnerships for global health. It is a win/win. Merck benefits from PSI's existing, on-the-ground network of health programs and our understanding of the local market for health products. We benefit from the Fellows' energy, ideas, expertise and commitment to innovation—allowing PSI to further enhance health impact across the world."

Karl Hofmann
President & CEO, PSI

DISASTER RELIEF

Merck provides disaster relief assistance during major disasters and supports efforts in preparedness and recovery.

Merck's Office of Corporate Philanthropy serves as the central clearinghouse for information regarding Merck's companywide response to major disasters, and works with the Office of Corporate Responsibility to make decisions related to the company's donations of cash and/or medicines and vaccines in a disaster situation.

Japan Earthquake (March 2011)

In response to the major earthquake and tsunami in Japan, Merck made cash donations that exceeded $2 million, which included a contribution of $1.25 million by The Merck Company Foundation, in addition to Merck employee donations. A large percentage of the employee donations were from Japan, which were matched by the Foundation. Of the total amount, $750,000 was distributed to Save the Children and $500,000 was sent to the American Red Cross. Approximately $550,000 in local product inventory was also donated to local medical groups. The company is continuing to work with our relief partners as the people of Japan rebuild their lives and communities.

At Merck, we believe that indiscriminate responses to urgent requests for assistance can be counterproductive. Therefore, we follow the long-standing recommendation by the Office of U.S. Foreign Disaster Assistance that a company's response be made on the basis of a firsthand assessment of need by local authorities and/or a designated relief agency. In major disaster situations, donations of Merck medicines are often made directly by the local Merck subsidiary or manufacturing facility. Where appropriate, and in consultation with local Merck management, the Office of Corporate Responsibility may donate pharmaceuticals and vaccines through the disaster and emergency relief component of the **Merck Medical Outreach Program**.

Our goals in providing disaster relief are to:

- Respond in a timely and appropriate manner
- Meet the needs of relief agencies and affected communities
- Provide consistent and coordinated companywide relief efforts
- Facilitate communication and dissemination of information among employees and key external groups, customers, Merck neighbors and relief agencies
- Evaluate continued assistance through recovery stages and, when possible, evaluate the need and feasibility of providing prevention and/or preparedness support

DISASTER AND EMERGENCY RELIEF SUMMARY	2009	2010	2011
Disaster relief efforts assisted	7	6	13
Total giving value of disaster relief contributions (cash and products, US$M)	1.5	24.0	13.8

American Red Cross

The Merck Company Foundation is providing a $1.5 million grant over three years (2009–2011) to support the American Red Cross Latin America Risk Reduction Activity (LARRA) project in seven countries in Central and South America: Colombia, Ecuador, El Salvador, Costa Rica, Panama, Paraguay and Peru. LARRA's goal is to help vulnerable communities and Red Cross national societies operating in disaster-prone areas by enhancing capacity in disaster preparedness and first aid and by helping to create opportunities to achieve higher standards of living.

To date, LARRA has reached nearly 26,000 beneficiaries. By offering information and training in disaster risk-management methods, volunteers in all seven countries have strengthened local capacity and enhanced disaster-preparedness activity at the community level.

Merck is also a long-standing member of the American Red Cross Annual Disaster Giving Program (ADGP). The Merck Company Foundation has pledged $2 million over four years (2010–2013) to support the ADGP and to help ensure that the Red Cross can be on the scene of a disaster as soon as possible. When disasters occur, the Red Cross is there to provide essential relief services for those in need. Our support helps the Red Cross deliver assistance immediately across affected areas, in partnership with local agencies.

Horn of Africa

Drought conditions in the Horn of Africa during 2011, coupled with conflict in Somalia, affected more than 13 million people in the region—including more than 300,000 children who were facing starvation. Malnutrition rates were at critical levels as the region suffered its worst dry spell in 50 years. To help with humanitarian response efforts, Merck contributed $100,000 to the U.S. Fund for UNICEF and $100,000 to the World Food Program USA to support their respective emergency response operations in the region.

United States

During 2011, the United States experienced a number of tornadoes, tropical storms and hurricanes, including Hurricane Irene and Tropical Storm Lee, as well as torrential rain, severe flooding and other storms in many areas of the country. To help support disaster response efforts, particularly in the aftermath of Hurricane Irene, Merck contributed $150,000 to the American Red Cross, in addition to The Merck Company Foundation's annual $500,000 contribution to the Red Cross Annual Disaster Giving Program. Merck also donated medicines, vaccines and consumer care products valued at more than $600,000 to partner organizations through the Merck Medical Outreach Program.

PRODUCT DONATIONS

At Merck, we believe that it's not enough to discover and develop new medicines and vaccines. We need to help get them to the people who need them.

One important way to achieve this goal is through product donations that address specific health needs, whether in communities with a fundamental lack of access to healthcare and services or in acute or protracted humanitarian crises. Our product donation programs and initiatives include:

The **Merck MECTIZAN® (ivermectin) Donation Program** is one of the most significant initiatives undertaken by Merck to help improve access to medicines in developing countries. Established 25 years ago, the Merck MECTIZAN Donation Program is the longest-running disease-specific drug donation program and public-private partnership of its kind, and is widely regarded as one of the most successful public-private health collaborations in the world.

The **Merck Medical Outreach Program** is the primary mechanism through which Merck donates our pharmaceuticals, vaccines and consumer health products for humanitarian assistance in the developing world and in support of disaster relief and emergency response worldwide.

The **Merck Patient Assistance Program** has provided Merck medicines free of charge to millions of Americans who, without our assistance, could not otherwise afford them.

GIVING OVERSIGHT

We recognize that our customers, communities, neighbors and investors have an interest in how we conduct ourselves and how we support our commitment to society.

Our philanthropy must reflect efficient, responsible, and ethical judgment and behavior. This is why Merck's Executive Committee and the Board Committee on Public Policy and Social Responsibility review our philanthropic programs and initiatives annually. In addition, the Office of Corporate Philanthropy and The Merck Company Foundation are periodically audited to ensure uniformity in our giving criteria and grant making; accuracy of outcomes data for our philanthropic programs; and compliance and transparency.

We use an online **grants management system**, which is global in reach. It allows qualified nonprofit organizations that are seeking cash contributions to electronically submit proposals and supporting documents. It also facilitates the submission of all required compliance documentation, before Merck reviews individual requests, and ensures uniform review of grant requests.

We manage our philanthropic giving through three mechanisms:

The Merck Company Foundation serves as the company's chief source of funding support to qualified nonprofit charitable and philanthropic organizations whose initiatives address important societal needs and whose goals are consistent with our giving priorities. Established in 1957, The Merck Company Foundation is a U.S.-based, private foundation funded entirely by Merck.

The Office of Corporate Philanthropy supports charitable programs through cash donations and employee volunteerism, which contribute not only to the health and well-being of people around the world, but also to Merck employees, our neighbors and others in communities where employees live and work and where the company conducts business. The Office of Corporate Philanthropy also coordinates Merck's disaster relief assistance throughout the world.

This office also engages with a range of stakeholders through initiatives that build healthcare capacity and manages donations of Merck's products. Through the **Merck Medical Outreach Program**, the primary mechanism through which Merck donates its pharmaceuticals, vaccines and consumer products for humanitarian assistance in the developing world and in support of disaster relief and emergencies worldwide. The Office of Corporate Responsibility manages the **Merck MECTIZAN® Donation Program** and vaccine-access programs in the developing world.

Charitable Grants

We report the charitable contributions made through the Office of Corporate Philanthropy and The Merck Company Foundation on our **website**. Information provided includes the names of recipient organizations, program names and descriptions, and amounts of the grants provided. Merck updates this information quarterly.

REPORTING INDICES

Since the release of our first corporate responsibility report in 2005, Merck has been committed to using the Global Reporting Initiative (GRI) guidelines to report our performance on environmental, social and governance (ESG) issues.

Except in 2009, due to data collection challenges and the harmonization process following the merger with Schering-Plough, Merck has utilized the GRI as well as the Access to Medicines Index (ATMI), the United Nations Global Compact Communication on Progress (UNGC COP), and the UN Millennium Development Goals (MDG) as our overall framework for corporate responsibility reporting. Our 2011 corporate responsibility report once again reflects our commitment to the GRI as well as to the other indices in our report.

MERCK
Be well

ACCESS TO MEDICINE INDEX

In preparing Merck's disclosures relating to access to medicines performance, we have referred to the Access to Medicine Index (ATMI)

This index is a first step toward a useful framework for transparent reporting about access to medicines performance, which will help inform our stakeholders and also enable us to compare our performance with that of peers on relevant metrics. We believe that this will help us focus on continuously improving the things that matter most. The table below summarizes where Merck disclosures can be found on the Merck website in relation to the ATMI criteria.

ATMI 2011

Technical Area	ATMI Criteria	Report Location
General Access to Medicine Management	ATM Governance	Access to Health
	ATM Management System	Access to Health
	Stakeholder Engagement	Stakeholder Engagement
Public Policy and Market Influence	Advocacy and Lobbying	Public Policy & Advocacy
	Competitive Behavior	Sales & Marketing
	Market Behavior	Sales & Marketing
Research and Development	Innovative R&D	Research & Development R & D for the Developing World
	Adaptive R&D	Research & Development
	Intellectual Property Sharing	Public Policy & Advocacy
Equitable Pricing, Manufacturing and Distribution	Marketing Approval	Product Registration Access to Health
	Equitable Pricing	Pricing Access to Health
	Manufacturing and Distribution	Supply Chain Access to Health Committed to Improving Access to HIV Vaccines Women's Health

ATMI 2011

Technical Area	ATMI Criteria	Report Location
Patents and Licensing	Patents	Supply Chain Access to Health Committed to Improving Access to HIV Vaccines Women's Health
	Non-Exclusive Voluntary Licensing	Supply Chain Committed to Improving Access to HIV
Capability Advancement in Product Development and Distribution	Capacity Building in Research and Development	Research & Development (Partnerships tab) Access to Health
	Capacity Building in Quality Management and Distribution	Quality & Safety Standards
Product Donations and Philanthropic Activities	Donations	Patient Assistance Program Product Donations Merck Medical Outreach Program
	Philanthropy	Giving at Merck

GRI INDEX

Merck reports in accordance with the Global Reporting Initiative (GRI) G3.1 guidelines on our corporate responsibility (CR) website.

The voluntary guidelines offer a useful framework for transparent reporting about environmental, social and governance performance. Greater transparency on such matters is beneficial to our business because it helps to inform our stakeholders and also enables us to compare performance with that of peers on relevant metrics. We believe that this will help us focus on continuously improving the things that matter most.

This report has been prepared according to the GRI Guidelines, at Application Level A, and is in the process of being submitted for the GRI Application Level Check.

The table below summarizes where the disclosures can be found on the Merck website.

GRI INDEX — PERFORMANCE INDICATORS

Category / Indicator	Description	Report Location	Notes
Environmental			
DMA	A brief overview of the organization's management approach, including: goals and performance, policy, organizational responsibility, training and awareness, monitoring and follow up, and any additional contextual information.	EHS Management & Compliance	
EN1	Materials used by weight or volume.	Emissions, Effluents & Waste	We only report solvent use, since its our most material input.
EN2	Percentage of materials used that are recycled input materials.	Emissions, Effluents & Waste	We only report solvent use, since its our most material input.
EN3	Direct energy consumption, by primary energy source.	Energy Use & Climate Change	
EN4	Indirect energy consumption, by primary source.	Energy Use & Climate Change	
EN5	Energy saved due to conservation and efficiency improvements.	Energy Use & Climate Change	
EN6	Initiatives to provide energy-efficient or renewable energy–based products and services, and reductions in energy requirements as a result of these initiatives.		Not relevant to our products, which are pharmaceuticals, biologics, vaccines and consumer health products.
EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	Energy Use & Climate Change Transparency Disclosures	Also see our **CDP Report**.
EN8	Total water withdrawal, by source.	Water	
EN9	Water sources significantly affected by withdrawal of water.		Merck's water withdrawals do not meet any criteria defined as significantly affecting a water source.
EN10	Percentage and total volume of water recycled and reused.	Water	

GRI INDEX — PERFORMANCE INDICATORS

Category / Indicator	Description	Report Location	Notes
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.		We have only one facility that is adjacent to an area of high biodiversity value. That is our facility in Elkton, Virginia, which is located near the Shenadoah National Park.
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	Product Stewardship Pharmaceuticals in the Environment Environmental Risk Assessments	We discuss our process for conducting environmental risk assessments on our pharmaceutical products.
EN13	Habitats protected or restored.		Not disclosed. We do provide funding/financial support to environmental organizations in local communities through our Neighbor of Choice program.
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.	Product Stewardship Environmental Risk Assessments Pharmaceuticals in the Environment	
EN15	Number of IUCN (International Union for Conservation of Nature and Natural Resources) Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.		We have identified the (<30) facilities in or adjacent to ecoregions populated by IUCN Red List and national conservation list species. We are in the process of evaluating the impact of these sites.
EN16	Total direct and indirect greenhouse gas emissions, by weight.	Energy Use & Climate Change Transparency Disclosures	Also see our **CDP Report**.
EN17	Other relevant indirect greenhouse gas emissions, by weight.	Energy Use & Climate Change Transparency Disclosures	Also see our **CDP Report**.
EN18	Initiatives to reduce greenhouse gas emissions, and reductions achieved.	Energy Use & Climate Change Transparency Disclosures	Also see our **CDP Report**.

GRI INDEX — PERFORMANCE INDICATORS

Category / Indicator	Description	Report Location	Notes
EN19	Emissions of ozone-depleting substances, by weight.	Energy Use & Climate Change Transparency Disclosures	Also see our **CDP Report**.
EN20	NOx, SOx, and other significant air emissions, by type and weight.	Emissions, Effluents & Waste Transparency Disclosures	Also see our **CDP Report**.
EN21	Total water discharge, by quality and destination.	Emissions, Effluents & Waste	
EN22	Total weight of waste, by type and disposal method.	Waste	
EN23	Total number and volume of significant spills.	EHS Management & Compliance	
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported hazardous waste shipped internationally.	Emissions, Effluents & Waste	
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.		Merck's discharges and runoff do not meet any of the criteria for significantly affecting a water source.
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	Product Stewardship Emissions, Effluents & Waste	
EN27	Percentage of products sold and their packaging materials that are reclaimed, by category.	Packaging Environmental Goals	We will have more information in our 2012 report.
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	EHS Management & Compliance	

GRI INDEX — PERFORMANCE INDICATORS

Category / Indicator	Description	Report Location	Notes
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.	Energy Use & Climate Change	
EN30	Total environmental protection expenditures and investments, by type.		We report on some of our environmental protection expenditures in the **2011 10-K**. These expenditures are integrated into our sites' operating budgets; we do not have a system to mark these expenditures as specific to environmental protection and to report them separately.
Human Rights			
DMA	A brief overview of the organization's management approach, including: goals and performance, policy, organizational responsibility, training and awareness, monitoring and follow-up, and any additional contextual information.	Human Rights	
HR1	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns or that have undergone human rights screening.	Human Rights External Supplier Network	**Business Partner Code of Conduct**
HR2	Percentage of significant suppliers, contractors and other business partners that have undergone screening on human rights screening, and actions taken.	Human Rights External Supplier Network	**Business Partner Code of Conduct**
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	Office of Ethics Code of Conduct	90 percent of employees took the Code of Conduct training in 2011.
HR4	Total number of incidents of discrimination, and actions taken.	Office of Ethics	

GRI INDEX — PERFORMANCE INDICATORS

Category / Indicator	Description	Report Location	Notes
HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights.	Human Rights	**Business Partner Code of Conduct**
HR6	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor.	Human Rights	**Business Partner Code of Conduct**
HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor.	Human Rights Supply Chain	**Business Partner Code of Conduct**
HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.		We currently do not report on this non-core indicator, as the nature of our business does not require extensive security personnel in our global operations.
HR9	Total number of incidents of violations involving rights of indigenous people, and actions taken.		Our operations do not significantly impact indigenous communities.
HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments.		We are developing an internal assessment mechanism that we will utilize to report on this indicator in future reports.
HR11	Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms.	Office of Ethics	We have an internal grievance mechanism in place that allows employees and our business partners to report any suspected human rights violations (or other ethical or policy violations). We also have an external mechanism in place in the U.S. to report grievances via the Merck National Service Center. We currently do not break down the types of grievances we receive through the Office of Ethics in our report.

GRI INDEX — PERFORMANCE INDICATORS

Category / Indicator	Description	Report Location	Notes
Labor Practices and Decent Work			
DMA	A brief overview of the organization's management approach, including: goals and performance, policy, organizational responsibility, training and awareness, monitoring and follow-up, and any additional contextual information.	Human Rights	
LA1	Total workforce by employment type, employment contract and region, broken down by gender.	Positive Work Environment Economic Impact	
LA2	Total number and rate of new employee hires and employee turnover, by age group, gender, and region.	Positive Work Environment	
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	Compensation & Benefits	
LA4	Percentage of employees covered by collective bargaining agreements.	Human Rights	
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.		Merck does not have the same minimum notice period in all countries. Local legislation and collective bargaining agreement specifications vary, with notice periods ranging from four weeks to six months.
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	Wellness	
LA7	Rates of injury, occupational diseases, lost days and absenteeism, and number of work-related fatalities, by region and gender.	Employee Health Employee Safety	

GRI INDEX — PERFORMANCE INDICATORS

Category / Indicator	Description	Report Location	Notes
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	Employee Health	
LA9	Health and safety topics covered in formal agreements with trade unions.		While we do have a "Health and Safety" section in our U.S. trade union agreements, the specific language varies from agreement to agreement. This section addresses medical services and surveillance, the company's commitment to responsibly provide for employee health and safety, and, in some cases, protective-equipment training.
LA15	Return-to-work and retention rates after parental leave, by gender.		Due to ongoing benefits-harmonization between legacy Merck and Schering-Plough, we are not in a position to provide this data at this time. We anticipate providing this data in 2013.
LA10	Average hours of training per year per employee, by gender and employee category.	Office of Ethics Training & Education Global Privacy Program EHS Management & Compliance Positive Work Environment Sales & Marketing	We conduct extensive training programs worldwide, but we do not currently track these by gender. We will be able to report this data in 2014.
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	Training & Education	
LA12	Percentage of employees receiving regular performance and career-development reviews, by gender.	Positive Work Environment	

GRI INDEX — PERFORMANCE INDICATORS

Category / Indicator	Description	Report Location	Notes
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.	Diversity & Inclusion	
LA14	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.		Due to ongoing compensation-harmonization efforts between legacy Merck and Schering-Plough, we are not in a position at this time to provide this data. We anticipate providing this data in 2014.
Society			
DMA	A brief overview of the organization's management approach, including: goals and performance, policy, organizational responsibility, training and awareness, monitoring and follow-up, and any additional contextual information.	Ethics & Transparency	
SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs.	Supporting Our Communities Community Environmental Risk Assessments	
SO9	Operations with significant potential or actual negative impacts on local communities.		Our operations generally do not have a significant potential or actual negative impact on local communities.
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.		We do not currently report on this indicator. However, a few facilities require Risk Management Plans or equivalent requirements.
SO2	Percentage and total number of business units analyzed for risks related to corruption.	Code of Conduct Sales & Marketing Information & Interaction	**Merck Code of Conduct**
SO3	Percentage of employees trained in organization's anticorruption policies and procedures.	Ethics & Transparency Sales & Marketing Information & Interaction	

GRI INDEX — PERFORMANCE INDICATORS

Category / Indicator	Description	Report Location	Notes
SO4	Actions taken in response to incidents of corruption.	Ethics & Transparency Code of Conduct Sales & Marketing Information & Interaction	
SO5	Public policy positions and participation in public policy development and lobbying.	Public Policy & Advocacy	
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions, by country.	Transparency Disclosures	
SO7	Total number of legal actions for anticompetitive behavior, antitrust, and monopoly practices and their outcomes.		**2011 10-K**, pages 113–126.
SO8	Monetary value of significant fines and total number of nonmonetary sanctions for noncompliance with laws and regulations.	EHS Management & Compliance Ethics & Transparency	**Merck Compliance**
Product Responsibility			
DMA	A brief overview of the organization's management approach, including: goals and performance, policy, organizational responsibility, training and awareness, monitoring and follow-up, and any additional contextual information.	Product Stewardship Quality & Safety Standards Patient Safety	
PR1	Life-cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	Research & Development Supply Chain Quality & Safety Standards Product Stewardship Patient Safety	

GRI INDEX — PERFORMANCE INDICATORS

Category / Indicator	Description	Report Location	Notes
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health, and safety impacts of products and services during their life cycles, by type of outcomes.	Transparency Dislosures Supply Chain Quality & Safety Standards	**USA.gov**
PR3	Type of product and service information required, by procedures, and percentage of significant products and services subject to such information requirements.	Transparency Disclosures Clinical Trials Quality & Safety Standards Sales & Marketing Patient Safety	
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	Sales & Marketing Supply Chain	
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.		We do not report on this indicator, as it is unlawful because of privacy laws to have a global, companywide, harmonized customer database that contains identifying information about our customers that could be accessed on an intercountry level. We measure customer relationships through primary market research at the local level, and intend to improve our measurement process to be able to report data in 2013.
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	Sales & Marketing	
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes.	Sales & Marketing	

GRI INDEX — PERFORMANCE INDICATORS

Category / Indicator	Description	Report Location	Notes
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	Global Privacy Program	
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	Sales & Marketing	
Economic			
DMA	A brief overview of the organization's management approach, including: goals and performance, policy, organizational responsibility, training and awareness, monitoring and follow-up, and any additional contextual information.	Our Business	
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, payments to capital providers, and payments to governments.	Positive Work Environment Our Business Community Product Donations	**2011 10-K**, pages 83–86.
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change.	Energy Use & Climate Change Transparency Disclosures	
EC3	Coverage of the organization's defined benefit-plan obligations.		**2011 10-K**, pages 129–136.
EC4	Significant financial assistance received from government.		We do not currently track this information.
EC5	Range of ratios of standard entry-level wage compared with local minimum wage at significant locations of operation.		We do not currently track this information.

GRI INDEX — PERFORMANCE INDICATORS

Category / Indicator	Description	Report Location	Notes
EC6	Policy, practices, and proportion of spending on locally based suppliers at significant locations of operation.	Supplier Diversity External Supplier Network	
EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.	Diversity & Inclusion	Though we endeavor to hire local personnel whenever possible, we also are committed to hiring the most suitable candidate for the job. Utilizing expatriates usually occurs because of a lack of available skills locally, and our remit is to build such skills at the local level and to develop future leaders. We also may use expatriate assignments to develop our talent to have broader perspectives than would be possible in just one market. Our MSD University recently set a goal "to accelerate the development of local leaders and critical organizational capabilities in emerging markets."
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	Access to Health Education Community Foundation	
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts.	Access to Health Giving at Merck Our Business Supporting Our Communities	

MILLENNIUM DEVELOPMENT GOALS

The private sector, including the research-based pharmaceutical industry, has an important role to play in contributing to the achievement of the United Nations Millennium Development Goals (MDGs).

At the 2008 Annual Meeting of the World Economic Forum, in Davos, Switzerland, Merck joined UN Secretary General Dr. Ban Ki-moon, U.K. Prime Minister Gordon Brown and leaders from other private and public sector organizations to endorse a "Call to Action on the Millennium Development Goals," pledging to work together to accelerate progress toward the MDGs. The table below summarizes where information can be found on our website in relation to how Merck is contributing to the MDGs.

MILLENNIUM DEVELOPMENT GOALS

Goal	Description	Report Location
1	Eradicate extreme poverty and hunger	Health
2	Achieve universal primary education	Education
3	Promote gender equality and empower women	Diversity & Inclusion
4	Reduce child mortality	Public/Private Partnerships Vaccines Pediatric Treatments for HIV
5	Improve maternal health	Women's Health Merck for Mothers
6	Combat HIV/AIDS, malaria & other diseases	Committed to Improving Access to HIV Care Vaccines R&D for the Developing World Global Burden of Disease
7	Ensure environmental sustainability	Environmental Sustainability
8	Develop a global partnership for development	Public/Private Partnerships

UN GLOBAL COMPACT

In January 2009, Merck signed on to the United Nations Global Compact, the world's largest and most widely embraced corporate citizenship initiative.

By signing on, the company confirms its commitment to support the Compact's 10 universally accepted principles in the areas of human rights, labor, environment and anti-corruption. Signatories to the Compact are required to annually report their activities in support of their commitment to instill accountability, drive continuous improvement, safeguard the integrity of the UN Global Compact as a whole, and contribute to the development of a repository of corporate practices. The table below summarizes where Merck disclosures can be found on the Merck website in relation to UN Global Compact principles.

UN GLOBAL COMPACT / 2011 COMMUNICATION ON PROGESS

Principle	Description	Report Location
1	Business should support and respect the protection of internationally proclaimed human rights	Human Rights
2	Business should make sure that they are not complicit in human rights abuses	Human Rights External Supplier Network
3	Businesses should uphold the freedom of association and the effective recognition of the rights to collective bargaining	Human Rights
4	Businesses should support the elimination of all forms of forced and compulsory labor	Human Rights
5	Businesses should support the effective abolition of child labor	Human Rights
6	Business should support the elimination of discrimination in respect of employment and occupation	Human Rights Office of Ethics Diversity & Inclusion
7	Businesses should support a precautionary approach to environmental challenges	Environmental Sustainability EHS Management & Compliance Supply Chain Product Stewardship
8	Business should undertake initiatives to promote greater environmental responsibility	Environmental Sustainability EHS Management & Compliance Supply Chain Product Stewardship
9	Businesses should encourage the development and diffusion of environmentally friendly technologies	Environmental Sustainability Product Stewardship Green Chemistry
10	Businesses should work against corruption in all its forms, including extortion and bribery	Ethics & Transparency Office of Ethics Product Stewardship

KPIs

In 2010, we began to reevaluate how we measure our corporate responsibility efforts. With more than 80 separate key performance indicators (KPIs), we recognized a need to focus these measurements with our new corporate responsibility framework.

First, we categorized the existing measurements according to the priority areas of our new framework: **Access to Health**, **Environmental Sustainability**, **Employees**, and **Ethics and Transparency**. If measurements did not fit into these categories, they were evaluated for materiality and either kept as a measurement for our overall reporting efforts or discontinued.

We then presented the distilled measurements under each framework category to various stakeholders in relevant business areas to test whether each metric was a useful business assessment and whether it measured progress and improvement effectively.

After several reviews, including input from senior management responsible for each area of the framework, we settled on a set of 36 KPIs that directly align with this framework and our business priorities to help us measure our progress.

The following list of KPIs serve as a baseline measurement for our corporate responsibility activities. Many of these metrics belong to a subset of the existing metrics and, where applicable, were carried over to this data set, while others have been newly created. We will begin reporting on this complete list of measurements in our 2011 corporate responsibility report. These indicators are measured globally unless otherwise noted and cover all **our business units** with the exception of joint ventures.

ACCESS TO HEALTH

Research & Development	2011
Top 20 global burdens of illness addressed by our products and pipeline (as defined by the WHO, and excluding accidents, premature birth and self-inflicted injuries)	53%
GCP/PV audits by regulatory agencies of Merck or clinical trial investigators that led to significant fines, penalties, warning letters or product seizures	0
Initiated (new) licenses for new technologies	52
Narrative of compounds provided to Product Development Partnerships[1]	Online
Manufacturing & Supply	
Product recalls in the United States	0
Countries we currently supply with our products	140
Local and regional manufacturing partnerships	130
Products available via local and regional manufacturing_partnerships[2]	N/A
Registration	
New product and device registrations by region[3,4]	334
Local regulatory agency GCP/PV training requests fulfilled that will help strengthen agency capabilities with their GCP/PV compliance oversight role[5]	Online
Products submitted that have achieved WHO prequalifications	10
Commercialization	
Products for which we have access pricing[6]	17
Countries where at least one product has intra-country pricing of public and private sectors[7]	49
Investment in patient-and-provider-education programs	$93.9M
Community Investment	
Healthcare workers trained through our major programs and partnerships8	51,600
Investment in partnerships for activities that address underlying barriers to health, such as nutrition and access to clean water[9]	$34.7M
People reached through our major programs and partnerships[8,10]	272.7M

ACCESS TO HEALTH

[1] For information on Product Development Partnerships, visit the "Partnership" tab at: www.merckresponsibility.com/focus-areas/access-to-health/research-and-development/home.html
[2] We aim to make the majority of our product portfolio available through these partnerships. Total product number will need to be confirmed due to ongoing product rationalization.
[3] Data includes new products and new indications.
[4] For information on new registrations by region, visit: www.merckresponsibility.com/focus-areas/access-to-health/research-and-development/clinical-research/home.html
[5] For information on local regulatory agency GCP/PV training requests, visit: www.merckresponsibility.com/focus-areas/access-to-health/research-and-development/clinical-research/home.html
[6] Differential pricing intended to facilitate access for the at-need population.
[7] Countries with an MSD trading entity.
[8] "Major" is defined as an investment by Merck's Office of Corporate Philanthropy and/or The Merck Company Foundation of more than $300,000 per year and/or an engagement with a national government.
[9] Includes investments by Merck's Office of Corporate Philanthropy and/or The Merck Company Foundation; also includes funding for health system strengthening and capacity building.
[10] Includes treatments approved for river blindness and lymphatic filariasis through the Merck MECTIZAN® Donation Program.
N/A: Not Available.

ENVIRONMENTAL SUSTAINABILITY

	2011
Total greenhouse gas (GHG) emissions (as CO_2e) (million metric tons)	2.09
Emissions of volatile organic compounds (VOCs) (metric tons)[11]	931
Total water usage (billion gallons)	9.2
Hazardous waste generated (metric tons)[12]	81,000
Hazardous waste recycled	30%
Nonhazardous waste generated (metric tons)[13]	62,000
Nonhazardous waste recycled	47%

[11] Data should be considered an estimate.
[12] Includes all waste that requires special handling, as defined by a national, state/provincial or local regulatory agency (e.g., RCRA, special waste, chemical waste, dangerous waste). It also includes petroleum products, pharmaceutical actives/intermediates, medical/biological/infectious materials, or any other materials or compounds that are specially regulated due to the hazard they pose to human health and/or the environment.
[13] Data should be considered estimated, because many of these waste streams are not weighed prior to disposal.

ETHICS & TRANSPARENCY

	2011
Employees trained on our Code of Conduct[14]	90%
Substantiated allegations to concerns/issues raised to the Office of Ethics/Ombudsman/AdviceLine	65%
Reported concerns regarding privacy practices, breaches of privacy and losses of personal data that were substantiated[15]	68%

[14] As a result of the merger, data for 2009 & 2010 does not fully reflect a harmonized training process for the combined company. By the end of 2013, we will have the ability to report on global training.
[15] "Privacy" concerns include all concerns escalated to the Merck Privacy Office about the company's privacy practices.

EMPLOYEES

Diversity & Inclusion	2011
Women in executive roles (U.S.)[16]	35%
Women on the Board	17%
Underrepresented ethnic groups on the Board	11%
Underrepresented ethnic groups in the workforce (U.S.)	29%
Well-Being	
Employees "engaged" or "fully engaged" (Merck Culture Survey)	49%
Employees who completed health assessment (U.S.)	58%
Overall turnover rate[17]	14%
Employee Lost-Time Injury Rate (LTIR)[18]	0.30
Employee Recordable Injury Rate (RIR)[19]	0.74
Volunteerism	
Employees who took release time, according to the global policy on employee volunteerism (estimated)[20]	8,162
Volunteer hours (estimated)	210,500

[16] Executive is defined as one to two levels below the chief executive officer.
[17] Overall turnover incorporates all types of turnover, including restructuring.
[18] LTIR: Calculated per OSHA methodology.
[19] RIR: Calculated per OSHA methodology.
[20] Employees are not required to report volunteer hours; metrics are based on self-reported employee data.

FORWARD-LOOKING STATEMENT

This communication includes "forward-looking statements" within the meaning of the safe harbor provisions of the United States Private Securities Litigation Reform Act of 1995. Such statements may include, but are not limited to, statements about the benefits of the merger between Merck and Schering-Plough, including future financial and operating results; the combined company's plans, objectives, expectations and intentions; and other statements that are not historical facts. Such statements are based upon the current beliefs and expectations of Merck's management and are subject to significant risks and uncertainties. Actual results may differ from those set forth in the forward-looking statements.

The following factors, among others, could cause actual results to differ from those set forth in the forward-looking statements: the possibility that all of the expected synergies from the merger of Merck and Schering-Plough will not be realized, or will not be realized within the expected time period; the impact of pharmaceutical industry regulation and healthcare legislation in the United States and internationally; Merck's ability to accurately predict future market conditions; dependence on the effectiveness of Merck's patents and other protections for innovative products; and the exposure to litigation and/or regulatory actions.

Merck undertakes no obligation to publicly update any forward-looking statement whether as a result of new information, future events or otherwise. Additional factors that could cause results to differ materially from those described in the forward-looking statements can be found in Merck's 2011 Annual Report on Form 10-K and the company's other filings with the Securities and Exchange Commission (SEC) available at the **SEC's website**.